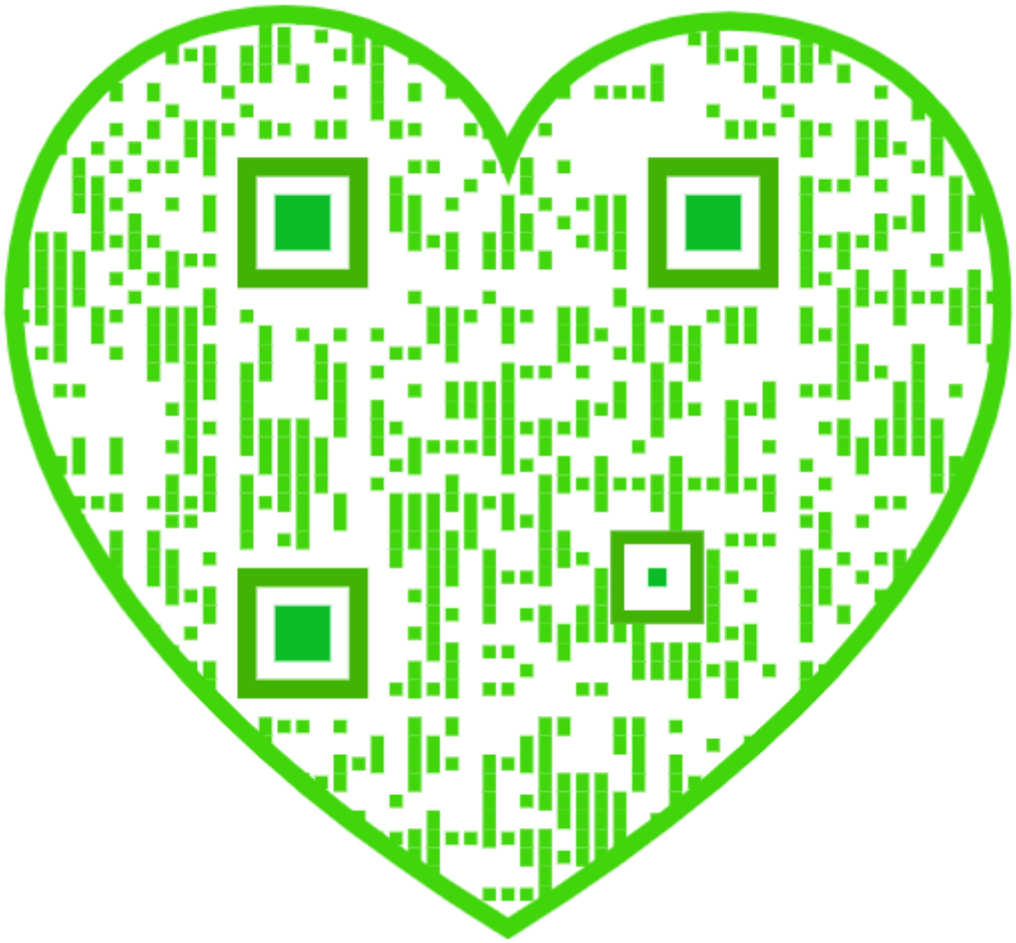
Hollinger Corp.
pH 8.5



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GEOGRAPHY

OF

MASSACHUSETTS;

A SUPPLEMENT TO THE

ECLECTIC SERIES OF GEOGRAPHIES.

BY

ALBERT P. MARBLE,

Superintendent of Schools, Worcester.

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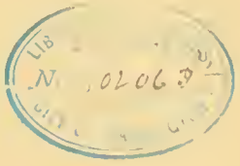

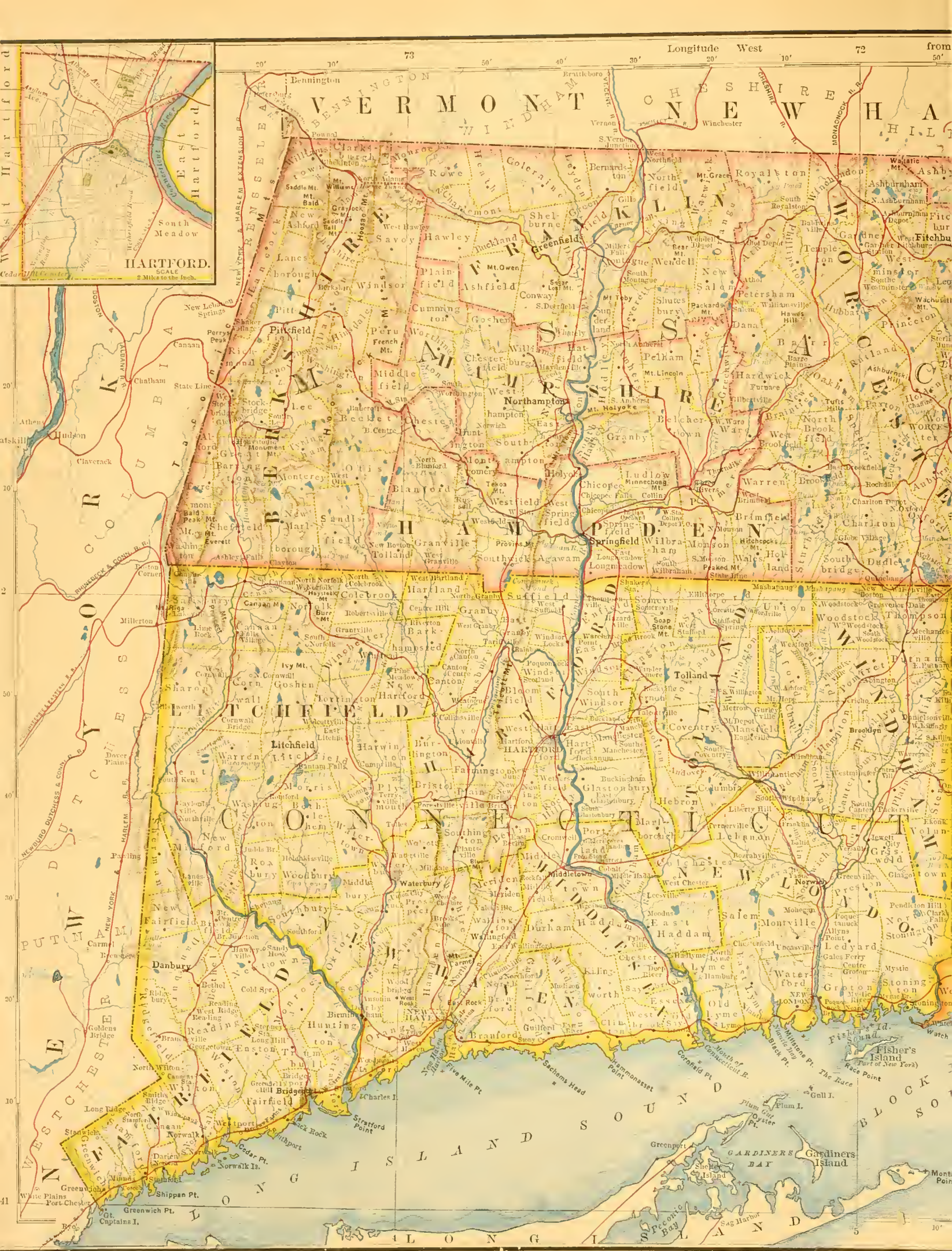
Longitude West
from
VERMONT
NEW HA
HAMPSHIRE
WINDHAM
BENNINGTON
CHESHIRE
FRANKLIN
WINDSOR
ORANGE
WORCESTER
BERKSHIRE
HAMPDEN
HAMPSHIRE
WORCESTER
LITCHFIELD
HARTFORD
TOLLAND
WINDHAM
NEW LONDON
FAIRFIELD
NEW HAVEN
MIDDLESEX
Bennington
Brattleboro
Vernon
Winchester
Pownal
Williamstown
Clarksburgh
Monroe
Rowe
Coleraine
Leyden
Bernardston
Northfield
Mt. Grace
Royalston
Ashburnham
Fitchburg
Saddle Mt.
Mt. Williams
Mt. Bald
Greylock Mt.
Saddle Ball Mt.
Hoosac Mt.
North Adams
Heath
Charlemont
Shelburne
Greenfield
Deerfield
Gill
Montague
Wendell
Athol
Petersham
Phillipston
Templeton
Gardner
Winchendon
Lanesborough
New Ashford
West Hawley
Savoy
Hawley
Buckland
Shelburne Falls
Millers Falls
Bear Mt.
Wendell Depot
Mt. Owen
Ashfield
Conway
Snake Mt.
Lost Mt.
Mt Toby
Sunderland
Leverett
Shutesbury
Packards Mt.
New Salem
Wendell Depot
Petersham
Hubbardston
Princeton
Berkshire
Windsor
Plainfield
Cummington
Goshen
Williamsburg
Hatfield
Whately
Amherst
Pelham
Barre
Barre Plains
Oakham
Rutland
Pittsfield
Peru
Worthington
Chesterfield
Northampton
Easthampton
S. Amherst
Mt. Holyoke
Mt. Lincoln
Hardwick
Gilbertsville
Tufts Hills
Paxton
Holden
Perry's Peak
Canaan
Chatham
State Line
Stockbridge
Lee
Becket
Chester
Huntington
Norwich
Granby
Belchertown
W. Ware
Ware
North Brookfield
West Brookfield
Brookfield
Leicester
Auburndale
Worcester
Athens
Hudson
Claverack
Alford
Great Mt.
Monument Mt.
Barrington
Otis
Monterey
West Otis
Blandford
Montgomery
Holyoke
Chicopee
Ludlow
Minnechaug Mt.
Chicopee Falls
Collins
Warren
Brookfield
Rochdale
Oxford
Charlton
Bald Peak Mt.
Mt. Everett
Sheffield
New Marlborough
Granville
New Boston
Tolland
West Granville
Southwick
Agawam
Springfield
East Longmeadow
Longmeadow
Wilbraham
Monson
Hitchcocks Mt.
Peaked Mt.
State Line
Hampden
Brimfield
Holland
Sturbridge
Southbridge
Dudley
Quinebaug
Boston Corners
Ashley Falls
Clayton
Provins Mt.
Chaplin
Canaan
North Canaan
North Norfolk
West Norfolk
Haystack Mt.
Colebrook
West Hartland
Harland
North Granby
Suffield
Somers
Somersville
Thompsonville
Enfield
Union
Woodstock
Thompson
Mechanicsville
Millerton
Lime Rock
Robertsville
Burr Mt.
Norfolk
Riverton
Barkhamsted
Granby
East Granby
Windsor Locks
Stafford
Stafford Springs
Soap Stone Mt.
Warehouse Point
East Windsor
Windsor
Scotland
Pequonock
Windsorville
Ellington
Tolland
Willington
Ashford
Eastford
Putnam
Pomfret
Killingly
Danielsonville
Brooklyn
Canton
Canton Centre
North Canton
Collinsville
Simsbury
Tariffville
Rainbow
Bloomfield
Windsor
South Windsor
Vernon
Rockville
Talcottville
Coventry
Mansfield
Eagleville
Mt. Hope
Gurleyville
Merrow
Chaplin
Hampton
Scotland
Canterbury
Plainfield
Sterling
Ivy Mt.
North Cornwall
Cornwall
Goshen
Torrington
Sharon
Cornwall Bridge
Litchfield
Bantam Falls
Warren
Kent
South Kent
Harwinton
Burlington
Farmington
Bristol
Plainville
Forestville
West Hartford
Hartford
South Manchester
Manchester
Buckland
East Hartford
Glastonbury
South Glastonbury
Hebron
Columbia
Willimantic
Windham
South Windham
Canterbury
Tuckerville
Dover Plains
Morris
Washington
Bethlehem
Roxbury
Woodbury
Southbury
Oxford
Seymour
Ansonia
Derby
Naugatuck
Waterbury
Watertown
Plymouth
Terryville
Thomaston
Plantsville
Southington
Cheshire
Wolcott
Meriden
Middletown
Cromwell
Portland
Marlborough
East Berlin
Berlin
Middlefield
Middletown
Rockfall
Cobalt
Middle Haddam
Colchester
Lebanon
Bozrahville
Jewett City
Griswold
Glasgow
Norwich
West Chester
Leesville
Moodus
Salem
Montville
Mohegan
Poquetanuck
Allyns Point
Pendleton Hill
Preston
Voluntown
Sterling
Putnam
Carmel
Brewsters
Patterson
Pawling
New York
Danbury
Bethel
Cold Spring
Ridgebury
Reading
West Redding
Redding
Georgetown
Easton
Trumbull
Hunting ton
Birmingham
Derby
Ansonia
Oxford
Woodbridge
Hamden
Mt. Carmel
East Rock
New Haven
West Rock
Wallingford
East Wallingford
Durham
Haddam
Chester
Deep River
Killingworth
Clinton
Westbrook
Essex
Old Lyme
Lyme
Hamburg
Waterford
Groton
Stonington
Mystic
Ledyard
Gales Ferry
Centre Groton
Uncasville
Chesterfield
Goldens Bridge
Mt. Kisco
North Salem
Lewisboro
North Wilton
Wilton
Cannondale
Georgetown
Redding
Ridgefield
Branchville
Long Hill
Stepney
Stevenson
Monroe
Newtown
Sandy Hook
Hawleyville
Botsford
Huntington
Shelton
Long Ridge
Smiths Bridge
North Stamford
Stamford
Greenwich
Port Chester
White Plains
Mamaroneck
Harrison
Rye
Port Chester
Greenwich Pt.
Captains I.
Shippan Pt.
Stamford
Darien
Noroton
Norwalk
Norwalk Is.
Cedar Pt.
Westport
Saugatuck
Green's Farms
Fairfield
Southport
Black Rock
Stratford Point
Charles I.
Bridgeport
Pequonnock
Stratford
Milford
Woodmont
Long Island Sound
New Haven Harbor
Five Mile Pt.
Sachems Head
Tommonasset Point
Cornfield Pt
Mouth of Connecticut R.
Black Pt.
Millstone Pt.
The Race
Race Point
Fisher's Island
(Part of New York)
Plum I.
Gull I.
Oyster Pt.
Greenport
Gardiners Bay
Gardiners Island
Shelter Island
Sag Harbor
Peconic Bay
Montauk Point
Block Island Sound
Long Island
Hartford
East Hartford
South Meadow
Connecticut River
Cedar Hill Cemetery
Albany Ave.
Asylum Ave.
Park River
Meadow
Broad
Main
Windsor
Wethersfield Road
Cooke Ave.
HARTFORD.
SCALE
2 Miles to the Inch.
Wm. P. Northrup & Co., Sc., Buffalo, N.Y.
(Copyright by Van Antwerp,

MAP OF
BOSTON
AND SUBURBS.
Scale 4 Miles to the Inch.
The pink tint indicates The City of Boston. The cities of Boston and Chelsea and the towns of Revere and Winthrop constitute Suffolk County.
MAP OF
MASSACHUSETTS,
RHODE ISLAND
AND
CONNECTICUT.
For the Eclectic Geographies.
SCALE
Statute Miles.
Natural Size as 1 to 760,320
or
12 Miles to the Inch.
NOTE—The dark blue shading indicates a depth of water less than 18 feet — the first line a depth of 10 fathoms; the second line a depth of 20 fathoms.
Longitude East from Washington.
Line of 18 feet.
Line of 10 fathoms.
Line of 20 fathoms.
Cape Cod
Nantucket I.
Martha's Vineyard I.
Boston
Plymouth
Taunton
Fall River
New Bedford
Newburyport
Lowell
Lawrence
Salem
Lynn
Gloucester
Cape Ann
Folly Point
Eastern Pt.
Plum Island
Mouth of Merrimac R.
Point Judith
Block Island
Sandy Pt.
Clay Head
The Harbor
Pilot Hill
Black Rock
Dickens Pt.
No Mans Land
Sankety Head
Great Point
Muskeget I.
Tuckernuck I.
Monomoy I.
Light Ship
Round Shoal
Old Man Shoal
South Shoal
Davis Shoal
Gurnet Pt.
Manomet Pt.
Long Pt.
Gammon Pt.
Angelica Pt.
Sconticut Pt.
Misham Pt.
Sakonnet Pt.
Seaconnet Pt.
Gooseberry Neck
Penikese I.
Cuttyhunk I.
Nashawena I.
Pasque I.
Naushon I.
Woods Hole
Nonamesset I.
Oak Bluffs
Edgartown
Chilmark
Gay Head
Gravelly Is.
Chappaquiddick I.
Katama
West Tisbury
Vineyard Sound
Buzzards Bay
Elizabeth Islands
Rhode Island
Narragansett Bay
Mount Hope Bay
Sakonnet R.
Taunton R.
Weir Jct.
Myricville
Dighton
Berkley
Middleborough
Lakeville
Rochester
Wareham
Agawam
Monument
Sandwich
Pocasset
Barnstable
Yarmouth
Hyannis
Harwich
Chatham
Brewster
Orleans
Eastham
Wellfleet
Billingsgate I.
Horse I.
Provincetown
Cape Cod Bay
Barnstable Bay
Nantucket Sound
Vineyard Sound
Massachusetts Bay
Boston Harbor
Quincy Bay
Hingham Bay
Dorchester Heights
Castle I.
Governors I.
Ft. Independence
Ft. Warren
Georges I.
Rainsford I.
Pt. Allerton
Hangmans I.
Peddocks I.
Moon I.
Long I.
Deer I.
Apple I.
Snake I.
Winthrop Head
Bass Pt.
East Pt.
Egg Rock
Nahant
Lynn Harbor
Chelsea
Everett
Medford
Malden
Melrose
Saugus
Lynn
Salisbury
Amesbury
Newbury
Haverhill
Andover
Lawrence
Methuen
Dracut
Tewksbury
Lowell
Billerica
Chelmsford
Westford
Littleton
Acton
Concord
Carlisle
Bedford
Lexington
Arlington
Belmont
Cambridge
Somerville
Charlestown
Waltham
Watertown
Newton
Brookline
Roxbury
Dorchester
Milton
Quincy
Weymouth
Braintree
Randolph
Canton
Stoughton
Sharon
Foxborough
Mansfield
Norton
Taunton
Raynham
Bridgewater
Easton
Brockton
Abington
Hingham
Scituate
Marshfield
Duxbury
Pembroke
Hanover
Hanson
Kingston
Plymouth
Carver
Middleborough
Lakeville
Rochester
Wareham
Plainville
Wrentham
Franklin
Medway
Millis
Natick
Framingham
Sudbury
Wayland
Weston
Needham
Dedham
Hyde Park
Milton
Braintree
Weymouth
Hingham
Cohasset
Scituate
Marshfield
Duxbury
Pembroke
Hanover
Hanson
Kingston
Plymouth
Carver
Middleborough
Lakeville
Rochester
Wareham
Providence
Pawtucket
Central Falls
Cumberland
Lincoln
Smithfield
North Smithfield
Woonsocket
Blackstone
Mendon
Uxbridge
Douglas
Sutton
Millbury
Auburn
Oxford
Webster
Dudley
Charlton
Southbridge
Sturbridge
Brimfield
Palmer
Monson
Wilbraham
Ludlow
Chicopee
Springfield
Longmeadow
East Longmeadow
Agawam
West Springfield
Holyoke
Granby
South Hadley
Belchertown
Ware
Palmer
Warren
Brookfield
West Brookfield
Spencer
Leicester
Worcester
Shrewsbury
Northborough
Southborough
Westborough
Grafton
Upton
Hopkinton
Holliston
Medway
Millis
Natick
Framingham
Sudbury
Wayland
Weston
Needham
Dedham
Hyde Park
Milton
Braintree
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Cohasset
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Providence
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Central Falls
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Lincoln
Smithfield
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Woonsocket
Blackstone
Mendon
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Douglas
Sutton
Millbury
Auburn
Oxford
Webster
Dudley
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Southbridge
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Brimfield
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South Hadley
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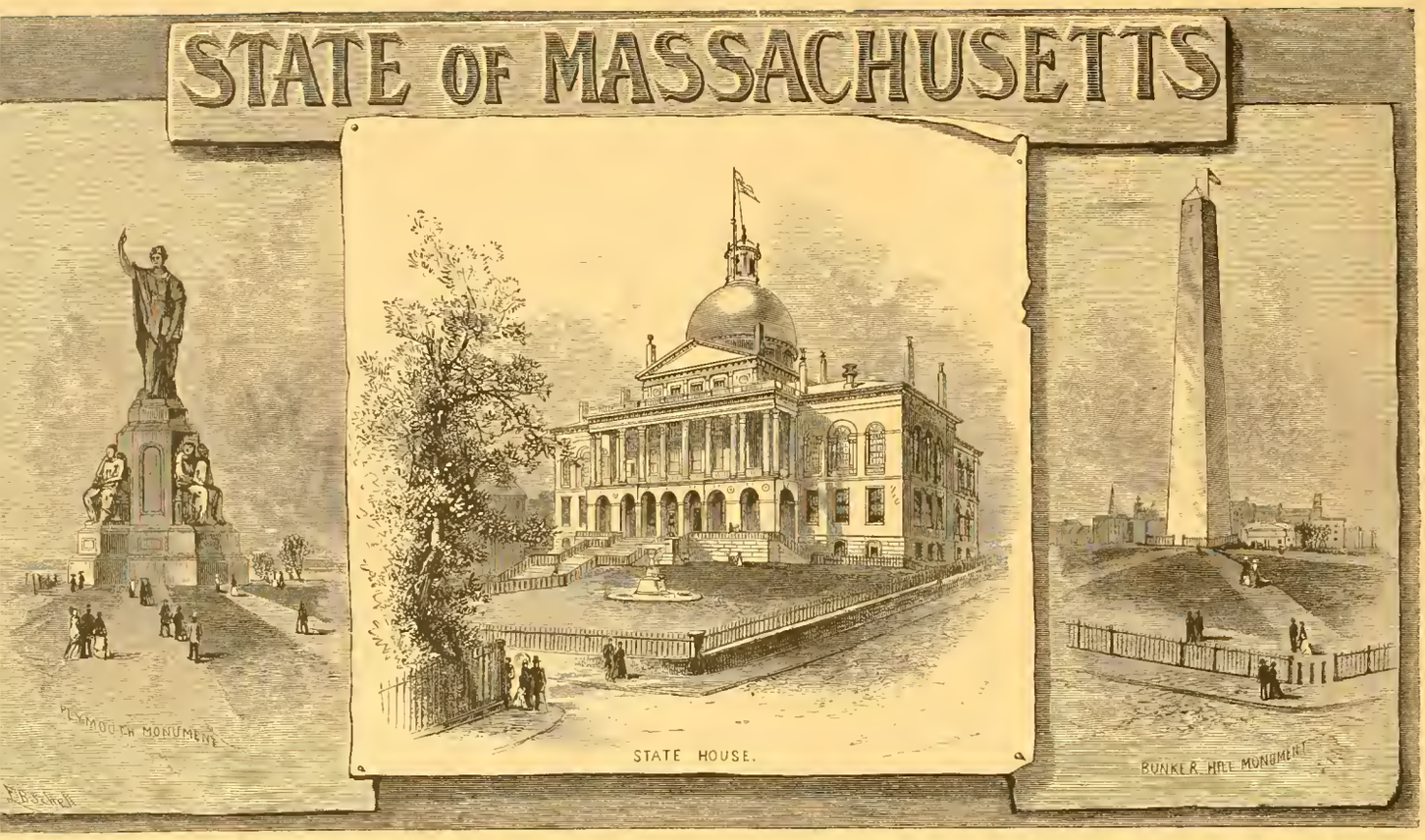
Leicester
Worcester
Shrewsbury
Northborough
Southborough
Westborough
Grafton
Upton
Hopkinton
Holliston

(N 97612)



DESCRIPTION.

(The Map Questions on page 5 should be studied before the Description.)

I. POSITION, OUTLINE, AND AREA.

Massachusetts, the oldest New England state, extends from 41° 42° 53′ north latitude in the eastern portion, though, for the part, it lies between 42° and 42° 45′; its longitude is from 69° 73° 30′ west from Greenwich.

It is **bounded** on the east by the Atlantic Ocean; on the south Atlantic Ocean, Rhode Island, and Connecticut; on the west ode Island and New York; and on the north by Vermont and Hampshire.

Extent and Outline. The distance from the north-east corner state to the south-east corner of Rhode Island is 95 miles; but ast line between these two points is about 300 miles. The ary line on the east of Rhode Island has an extent of about les; and on the north of that state, 21 miles. The boundary of Connecticut is about 87 miles; east of New York, 50 miles; of Vermont, 40 miles; south of New Hampshire, 60 miles to t three miles north of the Merrimac River; and, keeping about stance from the river, 30 miles north-east to the Atlantic Ocean.

The average width of the western part of the state is 47½ miles. astern portion, which extends from north to south nearly 100 has a width, between Rhode Island and the ocean, of about les. In the north part, the rocky promontory of Cape Ann s farthest east; in the south, the low peninsula of Cape Cod. trip of land extends east about 40 miles, and then bends to the 30 miles. In form, it is like a bent arm with a clenched It has been called "the great right arm of the state."

The state has an **area** of 7,800 square miles, or 4,992,000

II. ISLANDS AND BAYS.

6. The island of Nantucket is crescent-shaped; it lies 25 miles south of Cape Cod peninsula, and has an area of 50 square miles. Martha's Vineyard is a larger island, 10 miles west from Nantucket. The Elizabeth Islands, 16 in number, stretch along in a south-westerly direction, 18 miles, between Martha's Vineyard and the main land.

7. Massachusetts Bay is between Cape Ann and the peninsula of Cape Cod; the south part of it is called Cape Cod Bay In allusion to this broad bay and the towns of historic interest on its coast, Massachusetts is called the "Old Bay State."

Nantucket Sound is between Cape Cod, Nantucket, and Martha's Vineyard; Vineyard Sound is between Martha's Vineyard and the Elizabeth Islands; Buzzards Bay, between the Elizabeth Islands and the main land. The coast of these bays has many good harbors.

III. SURFACE OF THE COUNTRY.

8. The **surface** of Massachusetts is rugged. The greatest elevations are west of the Connecticut River. They are an extension of the Green Mountain Range of Vermont.

The Berkshire Hills are noted for the beauty of their scenery Of these hills the Taconic Range is west, and the Hoosac Range east, of the Housatonic River. Greylock, in the north part, is 3,505 feet above the sea; French Mountain, 2,239 feet.

9. Mount Tom, on the west side of the Connecticut River, in Hampshire County, is 1,214 feet high; and Mount Holyoke, on the other side of the river, is 1,120 feet. They belong to the White Mountain Range of New Hampshire.

MAP QUESTIONS.

Position and Outline. — What states bound Massachusetts on the north? What states on the south? What ocean on the east? What bays? What state on the west? What meridian crosses the state near the center? What one passes through Cape Cod? What one, near Boston? What parallel is nearly coincident with much of the southern boundary of Massachusetts? What is the general shape of the state? What peninsulas on the eastern coast? What indentations? What islands belong to Massachusetts? Where are they situated?

Surface. — Describe the surface as indicated on the map. In what part are there mountain ranges? Name them. Where is Mt. Greylock? Mt. Wachusett? Mt. Tom? French Mountain? Mt. Holyoke? Bald Peak Mountain? The Blue Hills? What is the prevailing slope of the state? Describe the principal water-sheds.

Rivers. — What is the largest river in Massachusetts? Describe the course of the Connecticut through the state. Name its tributaries from the west. From the east. What rivers rise in Berkshire County? In what direction does the Hoosic flow? The Housatonic? What important stream in north-eastern Massachusetts? Describe its course. Name its affluents from the state. Where is Ipswich River? Charles River? Mystic River? Describe the course of Taunton River. Of Blackstone River. Quinnebaug River. What streams have their source in Worcester County?

Counties. — How many counties in Massachusetts? Which county is largest? Which one smallest? Which one farthest north? East? West? Most central? Give the physical features of Berkshire County. Of Worcester County. Of Essex. Of Barnstable. What counties are composed of islands? What counties border Massachusetts Bay? Cape Cod Bay? Buzzards Bay? Through what counties does the Connecticut River flow? The Merrimac? What counties are adjacent to Rhode Island? To Connecticut? Vermont? New Hampshire?

Cities and Towns. — What is the capital of Massachusetts? How is Boston situated? Name the other principal seaports of the State. What large cities on the Merrimac River? What other important places in Essex County? In Middlesex County? Locate each town named. Mention and locate the county seats and chief towns of each of the following counties: Norfolk. Plymouth. Bristol. Barnstable. Dukes. Nantucket. What important cities on the line of the "Boston and Albany Railroad"? On the "Hoosac Tunnel Line"? Name other towns in Worcester County. What cities and towns of Massachusetts on the Connecticut River? What are the larger towns of Berkshire County? Name the principal railroad centers of the state.

Local Geography. — Locate and bound the county and the town in which you live. What can you say of the surface? If hilly or mountainous, what are the highest peaks? How high are these? If comparatively level, describe the surface slope. What streams rise in your county? What ones border or flow through it? Name and locate the largest cities. The county seat (or county seats, if more than one). The other leading towns. How many and what railroads intersect your county? Name their terminal points, whether in or out of the state. How far is Boston from the place in which you live?

Wachusett Mountain, in the north part of Worcester County, also belongs to this range, and is 2,018 feet high.

10. East of Worcester County, the hills grow less in height towards the ocean. The Blue Hills, in Norfolk County, are 835 feet high. Almost the whole south-eastern part of the state, with the islands near, is a sandy plain, having occasional elevations of 100 or 200 feet.

V. RIVERS AND WATER-SHED.

11. There are four principal **systems of drainage** in the state, viz: (1) The Housatonic, (2) the Connecticut, (3) the Merrimac, and (4) the waters flowing into Narragansett Bay and Long Island Sound.

In the western part of Berkshire County is the valley of the *Housatonic* to the south, and of the *Hoosic* to the north.

12. The valley of the *Connecticut* extends across the state from north to south, and about 60 miles from the Hoosac Mountains, to the hills near the center of Worcester County. This is the largest river in the state, through which it flows for 50 or 60 miles of its course, with a fall of 130 feet. Its chief branches in the state are the Deerfield and the Westfield, on the west, and Miller's River and the Chicopee, on the east. The Connecticut Valley is noted for its beautiful scenery, its fertile soil, and its water-power.

A low ridge, extending from Princeton, near the center of Worcester County, to the middle of Plymouth County, divides the waters flowing north and east into the Atlantic, from those flowing south and west into Narragansett Bay and Buzzards Bay.

13. The *Merrimac* flows through the north-eastern part of the state, 40 miles, into the Atlantic Ocean. Its water-power is used in the manufacture of cotton goods more than that of any other river in the country, if not in the world. Its chief branches in this state are the Nashua and the Concord.

The other rivers of this section are the Ipswich, the Mystic, and the Charles, which flow into the Atlantic Ocean.

14. The Blackstone drains one-fourth of Worcester County, in the central and south-eastern part, and flows into *Narragansett Bay*. The Quinnebaug drains the south-western part of Worcester County and part of Hampden County, and flows into *Long Island Sound*. The whole water-power of both is used chiefly in cotton and woolen-mills.

The Taunton drains parts of Plymouth and Bristol counties, and flows into Narragansett Bay.

Questions. — 1. Between what parallels and meridians is the principal part of the state situated? 2. Give the boundaries. 3. The extent of sea coast. The length of each state boundary line. 4. The average width of the state. The most easterly promontory and peninsula. Describe Cape Cod. 5. Give the area of the state.

6. Describe the principal islands. 7. The bays and sounds.

8. What is said of the surface? What hills in the western part? State the highest point. 9. Where are Mts. Tom, Holyoke, and Wachusett? 10. Describe the surface of the eastern and south-eastern parts.

11. How many systems of drainage? Name them. Describe the first. 12. The second. 13. The third. 14. The fourth.

V. CLIMATE AND ITS VARIATIONS.

15. The **climate** of Massachusetts is severe and variable. It represents, however, the average of the temperate latitudes in the United States, which is colder than the average in Europe; but the rigor of the climate has tended to make of the survivors a sturdy race.

The nearness of the Gulf Stream softens the extremes of heat and cold on the islands and the south-east coast. In winter, the temperature at Nantucket is 7° warmer than at Cambridge, and 10° warmer than at Williamstown, among the Berkshire hills; and at New Bedford, it is 5° and 7° warmer than at the two places, respectively. In the central and western counties, the mercury may fall 20° below zero in winter; and it often rises to 90° or 95° in summer.

The annual **rain-fall** varies greatly in different parts of the and the depth of **snow** is often great.

r a belt 20 miles wide eastward from Worcester, and extending from Con-
it towards the north-east, the yearly rain-fall is 44 inches; south-east of
lt about 15 miles, and north-west 25 miles, the fall is 42 inches; upon
nother belt about 25 miles to the west, and in the counties of Bristol and
uth, the fall is 40 inches; while in the extreme north-west, and on the
east coast and islands, the fall is only 38 or 39 inches.
average fall of snow each winter is 60 inches in the western part; in
terior valleys, 50 inches; and on the south-eastern coast, 30 inches.

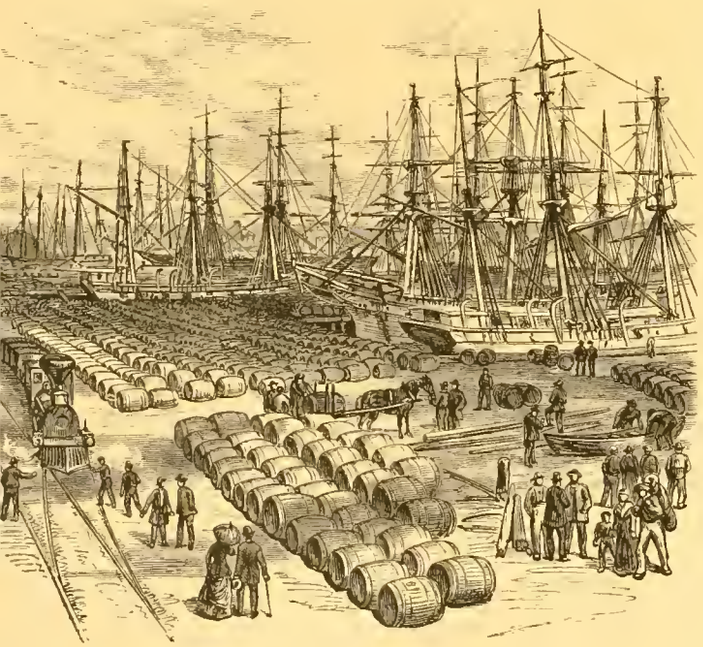
The north-east storms of spring are a disagreeable feature of limate; but the pure and elastic air of summer, and the rare y of the fall, compensate for the cold **winds** and winters.

VI. SOIL.

Compared with the fertile prairies of the West, the **soil** of chusetts is generally hard and barren. The sandy plains near oast, and on the islands, are unfruitful, and the rough hills are ly for grazing and wood-land. In the valleys of the rivers, er, especially of the Housatonic and the Connecticut, are many intervales; and patches of rich farming land are scattered be- the hills, and along the streams all over the state.

VII. MINERALS.

This state does not abound in **minerals.** The most valuable nite, which is quarried chiefly at Gloucester, Rockport, Fall , New Bedford, Monson, Milford, Quincy, and Uxbridge.



New Bedford Wharves.

Of the other mineral products, iron is obtained at Cheshire, Stockbridge, and New Braintree; limestone, at West Stock- e and Lenox; sandstone, at Longmeadow and Wareham; slate, laremont and Quincy. Mines of gold, silver, and lead, not worked as yet, are found at Newbury; of copper and marble, effield; of asbestos, at Pelham; and of emery, at Chester.

ESTIONS.—15. The climate? How is it modified? Extremes of temper- ? 16. The rain-fall? How distributed? The depth of snow? 17. Storms rinds?
General character of the soil? What parts are sterile? What, fertile? The most valuable mineral product? Where found? 20. Other minerals? e obtained?

VIII. VEGETATION.

21. **Native.** When found by white men, this state was covered with **forests;** and from the top of Mount Wachusett nothing could be seen but one broad expanse of green, with here and there an opening, and the smoke of the Indian's wigwam.

The felling of these forests has changed the climate, both as to temperature and the degree of moisture; and in large measure the nature of the soil is changed by the absence of the trees. The waste of forests has gone so far that the state has taken measures to protect them.

The "Massachusetts Society for promoting Agriculture" offer Tree Prizes for 1888, for plantations of forest trees.

On many of the stony hills, and along the streams, the prettiest, most useful, and best paying crop is forest trees. They are fit for harvest in 25 years.

The uses of forests are manifold. They create, or gradually but constantly improve, the soil; they serve as conductors of electricity between the clouds and the earth, thus giving activity to the vital powers of plants, and leading the clouds to discharge their contents upon the earth; they protect a country from the violence of winds; they keep the snow where it falls, so that it may slowly melt to fill the streams, and not come down in quick floods; they keep the soil from washing from the hills to the valleys and to the sea; they add to the healthfulness of the country, by drinking up the poisonous carbonic acid and the miasmata, and giving out oxygen; they are useful for fuel and timber; and they add beauty to the landscape.

22. The principal native trees are—*Deciduous:* the oak, hickory, birch, maple, ash, walnut, elm, beech, chestnut, hornbeam, lever wood, tupelo, nettle-tree, tulip-tree, plane-tree or sycamore, bass, locust, cherry, holly, poplar, and willow;—*Evergreen:* the pine, cedar, spruce, hemlock, fir, and hackmatack. The great variety of these forest trees, and their rich colored foliage, give an indescribable beauty to the country.

Besides these trees, there is an endless variety of shrubs and small plants, many of which any boy or girl may find on the way to school, and study with pleasure and profit.

23. **Cultivated.** The principal products of the soil are hay, potatoes, corn, tobacco, oats, garden vegetables, apples, pears, cranberries, strawberries, and a variety of other small fruits.

The total value of the agricultural products of the state for 1875 was $34,443,795.

IX. ANIMALS.

24. **Native.** The wild animals which roamed in the forests, and the birds and fishes which frequented the hills and waters of the state, and were hunted by the Indians, have many of them disappeared. Some are still seen in different parts of the state. The principal **wild animals** are: the black bear, wolf, catamount, wild cat, raccoon, wolverene, fox, mink, weasel, skunk, land otter, seal; the beaver, musk-rat, woodchuck, porcupine, hare, squirrel, rat, mouse; the fallow deer; the grampus, and the whale.

25. The **birds** of Massachusetts include: the eagle, hawk, owl; the cuckoo, woodpecker, king-fisher, lark, oriole, starling, crow, blue-jay, whip-poor-will, night-hawk, martin, robin, thrush, cat-bird, blue-bird, wren, humming-bird, sparrow, snow-bird, yellow-bird (goldfineh), pigeon; the wild turkey and quail; the plover, heron, sandpiper, snipe; the black skimmer, gull, snow-goose, duck, and loon.

26. The **reptiles** are: *snakes*—the black, striped, water, ribbon, garter, house, green, and rattlesnake; *batrachians*—the bull-frog, toad, and salamander.

27. Of marine **fishes** there are: the eel, swordfish, cod, hake, haddock, pollock, mackerel, perch, flounder, turbot, halibut, tautog, bass, sculpin, herring, menhaden, shad, alewife, salmon, smelt, sea-pike, sturgeon, shark, cat-fish, and blue-fish.

In the ponds and streams: the pickerel, trout, pout, shiner, sucker, white, red, and river-perch, river-eel, chub, and minnow.

28. The value of all **domestic animals** in the state in 1875 was $17,316,381, of which amount over $15,000,000 were in cattle and horses.

Questions.—21. The chief native vegetation? Of what use are forests? What has been done to protect them? Why? 22. Name the principal forest-trees. Deciduous? Evergreen? What other native growths are mentioned? 23. Principal farm products? Their aggregate value?

24. Are there many wild animals in the state? Name and describe the principal ones. 25. Tell what birds are found. 26. What reptiles? 27. Marine fishes? Fresh water fishes? 28. Value of the domestic animals? Of horses and cattle?

X. HISTORY AND PEOPLE.

29. **Indians.** The early people of Massachusetts were various Indian tribes belonging to the Iroquois nation. They have gradually disappeared before the white man. The small remnant of a single tribe are all that now remain within the limits of the state.

Massasoit, sachem of the Wampanoags, who lived between Narragansett Bay and Massachusetts Bay, made a treaty of friendship with the early white settlers, which lasted 50 years. His son, Metaco'met, known as King Philip, thought, quite rightly, that the white man would seize all the lands of the Indians. He joined his tribe with others, and made war; but the Indians were beaten, and King Philip was killed.

These tribes have left their names on the hills, rivers, lakes, and bays, and even the state itself—Wachusett, Bogachoag, Chicopee, Neponset, Quinsigamond, the unpronounceable Chaubunagungamauy Lake, in Webster, the musical Narragansett and Nantucket.

It is a pleasant study to trace in these names the history of men, women, and children, who once lived and hunted and played in the very places where we now dwell; but whose race, and even language, have all passed away. One of the last to linger was the Stockbridge tribe; they lived in the town of that name in Berkshire, and were partly civilized.

The Marshpee Indians still live in the town on Cape Cod, called by their name. They have a church, and schools provided by the state.

30. **Pilgrims.** The first white men to settle here landed at Plymouth in 1620. They disembarked after a perilous voyage of sixty-four days, and founded their settlement in the dead of winter. They were called Pilgrims; for they had left England, dwelt awhile in Holland, and then came hither for the sake of living and of worshiping God as they thought right.

Their vessel was called the Mayflower. Of the 102 passengers, one died on the voyage. Peregrin White was born in November, soon after the vessel arrived. He was the first white child born in New England. By the middle of the next spring all but 59 of the settlers had died.

The Pilgrims were under the spiritual care of Elder William Brewster. Before landing in a country without a government, they signed a kind of constitution, and chose John Carver governor. The people of this colony had a separate government, and elected a governor almost every year till 1692. They then became part of the colony of Massachusetts Bay. The southern boundary line of Norfolk County, the only straight county line within the state, was the northern boundary of the Plymouth colony.

Settlements. In November, 1620, the King of England, by a charter granted to "The Council established at Plymouth [England] for the planting, ordering, ruling, and governing of New England in America," all that part of America which lies between the 40th° and 48th° parallels of north latitude. This was the basis of all the patents by which the territory was afterwards divided.

In 1624 there was a settlement at Gloucester, which in 1625 removed to Salem, with Roger Conant as governor.

In March, 1628, Sir Henry Rosewell and others took a patent, from the Plymouth Council, of the territory between a line three miles south of the River Charles and three miles north of the Merrimac; thus the Salem colony passed under control of a new company, with John Endicott as governor.

By royal charter, the next March, a colony was created by the name of "The Governor and Company of the Massachusetts Bay in New England."

Seventeen ships filled with settlers came from England in 1630. Among these were John Winthrop, afterwards governor, and many other rich and noted people. About the same time settlements were made in Charlestown, Newtown (Cambridge), Matapan (Dorchester), Roxbury, Shawmut (Boston), Nantasket (Hull), Mystic (Medford), Lynn, and Winnisimmet (Chelsea). The first General Court was held in Boston, October, 1630.

31. **Puritans.** Those who first settled the Bay, came to Ameri to found a state after their own heart. Just escaped from persec tion, however, they persecuted. Toleration and civil and religio liberty were scarcely known at that day. They made the church t foundation of the government; and they claimed the right to dri away any one who did not agree with them. In this respect th were quite different from the Pilgrims.

For troubling them by preaching liberty of conscience, which was sediti to them, Roger Williams was banished in 1636, and founded Rhode Islar For the same thing, in 1637, they drove away Anne Hutchinson, a gift woman; she was killed in the woods by the Indians. Some fanatics, w called themselves Quakers, were banished in 1656; and a few of them who turned, were hanged.

In 1692 there was a general belief in witchcraft. At Salem, the jails w filled with victims; and twenty innocent persons were hanged. This delusi soon died out, as it had in other countries.

The bigotry of the Puritans was not peculiar to them; it belonged to t age. Their stern, God-fearing spirit was suited to the times, and just fitted th to battle with wild nature and war-like Indians, and to found a state. Little little their strict laws have softened; and now there is the greatest freed where once there was rigid intolerance. The first book of laws of the colo was printed in 1641. It was called the "Body of Liberties." Twelve offen were capital; in England, at the same time, 150 offenses were punisha with death. The colonists showed a spirit very liberal for their time. Mas chusetts Bay, the only colony that assumed the right, coined silver mor in 1652.

Indian and French Wars.—In 1643, the colonies of Massachusetts Bay, P mouth, Connecticut, and New Haven agreed to aid each other against Indians. In 1675, King Philip, the ablest Indian chief in New England, united the tribes in a war against the English. They attacked the people of Swans Brookfield, Hadley, Deerfield, Northampton, Lancaster, Medfield, Weymou Groton, Springfield, Sudbury, and Marlborough: 600 men, as many dwellin and 13 towns were destroyed in one year. The war closed by the death Philip in 1676.

In 1690, the New England colonies sent an army against the French Canada, because of the attacks made by the French and Indians upon borders of Maine, New Hampshire, and New York. The expedition failed.

In 1704, Deerfield was again attacked by the Indians, set on by the Fren in Canada; 40 persons were killed, and 100 made prisoners.

In 1710, because of war between France and England, the colonists sen force and captured Port Royal, a French town, in Nova Scotia. They m an unsuccessful attempt against Quebec, in 1711.

England and France being again at war, in 1745, a force of 4,000 men fr Massachusetts, New Hampshire, and Connecticut captured Louisbourg, a str and costly fortress on the island of Cape Breton.

France and England were again at war from 1754 to 1762. During this Massachusetts, aided somewhat by the other colonies and the mother coun captured Nova Scotia and Canada. These, with Cape Breton and other isla in the St. Lawrence, were ceded by France to Great Britain.

The Revolution.—In 1765, the British Parliament passed the "Stamp Ac to raise a revenue on all paper and parchment used in America. The colo united in opposition to this law, and the arbitrary acts of the royal governo and it was repealed the next year. In 1767 a law was passed for the sa object, laying a duty on many articles imported into the colonies. The d was finally removed from every thing but tea. In all this the colonists no voice. Boston forcibly resisted this tax, and, in 1770, in a conflict w British troops, called the "Boston Massacre," a number of citizens were kil This hastened the Revolution. The port was closed in 1774. In May, Gen Gage was sent to Boston by the king, as governor and commander of the troo He seized the powder and guns which the people had gathered.

A convention of delegates from all the colonies met in Philadelphia, S tember, 1774, and formed the Continental Congress. They agreed to stop tr with Great Britain till their grievances should be removed. The people w now thoroughly awake; public meetings were held especially in this colo military companies formed and drilled; powder and guns were collected; the men of Massachusetts were ready to fight the king to get back their liber

In April, 1775, General Gage sent troops to take the military stores at C cord. They met the militia in line at Lexington, and fired upon them. W of this went to Concord before the troops; a battle was fought there, and British, badly cut up, were glad to get back without the stores.

In June a large body of militia from all the New England colonies at Cambridge and other places near Boston; fortifications were thrown u among other places, at Breed's Hill, in Charlestown. On the 17th a battle fought, in which the British, though aided by their ships, were driven b three times. General Joseph Warren fell in the American trenches. Cha town was burnt. The Americans were driven from the hill, but were re the victors. This battle filled the Colonists with courage. It is called Battle of Bunker Hill; and a granite monument marks the spot.

y in July, General George Washington, of Virginia, took command of ovincial forces, under an elm tree on the Cambridge common which) this day is still standing. Forts were built, and batteries planted, to the British from Boston. In March, 1776, they sailed to Halifax, and to New York. The Massachusetts troops followed, and, in August, fight the Battle of Long Island.

war closed in 1783 with the independence of America. Through it all, husetts stood firm, and sent a large number of men and many worthy to support the American cause.

The state government was founded in 1780, with a written tution almost the same as now.

1788, this state ratified the Constitution of the United States.

1820, the district of Maine was made a separate state; it had a part of Massachusetts since 1692.

OF 1812. This war grew out of Great Britain's claim to take from an vessels seamen who were claimed as British subjects. It bore hard the commerce of this state, whose vessels were captured; but, though d to the war, her sailors maintained the honor of the flag.

CIVIL WAR. From the beginning of this war in 1861 to its close in Massachusetts took a leading part. One of her regiments shed the first in the streets of Baltimore. John A. Andrew, the "War Governor," put tte in the van. She furnished more than 160,000 men from a popu- in 1861, of 1,231,000.

state has furnished two presidents of the States—John Adams and his son John Quincy ; three vice-presidents—John Quincy Adams, ge Gerry, and Henry Wilson; several noted officers and foreign ministers; and many ; statesmen, among them Daniel Webster and s Sumner. Her influence in the nation has been great.

The **population** in 1875 was 1,651,912 number of persons born here who have to other states is, probably, as great as esent native population; and in their new they have had great influence on society olitics. The people are enterprising, in- ous, and frugal; a large part of the pau- and criminals are of the foreign born tion.

STIONS.—29. Early people? Tell about Massa- d his son. What Indian names have you Are any Indians now living in the state? o were the Pilgrims? Describe briefly their and their early settlements. 31. Who were ritans? For their time, were they tolerant or ? Relate a few historical incidents concerning them. What can you the Indian and French wars? State the leading events of the "Revo- " in which Massachusetts took part. 32. When was the state govern- ounded? When was the United States Constitution ratified? In what as Maine set off? How was Massachusetts affected by the "War of " What part did the state take in the "Civil War"? 33. Population ? What is said of the people?

XI. OCCUPATIONS AND PRODUCTIONS.

Of the entire population, there are engaged in active business 58 per cent, or 958,000.

nufacture is a leading pursuit. This is due largely to the val- water-powers within the state. About 33 per cent of the work- n, or 316,000, a larger per cent than in any other state, are yed in factories.

value of the manufactured products for 1875 was $592,332,000; apital employed, $282,683,000; the value of stock used, 000,000. The chief of these products for 1875 were boots and cotton and mixed goods, woolen goods, metallic goods, cloth- leather, machines and machinery, paper, furniture, carpetings, al instruments, carriages and wagons, clocks and watches, glass, gricultural implements.

35. **Ship-building** is carried on to a limited extent in the ocean counties. In 1875, vessels having a tonnage of 46,000, and valued at $3,162,000, were built.

36. **Commerce, Trade, and Transportation.** Of the workingmen, about 11 per cent, or 105,000, are engaged in these industries.

This state is the second in the Union in the extent of its foreign commerce; its coastwise trade is also very extensive, chiefly from the ports of Boston, New Bedford, Newburyport, Salem, and Gloucester.

By the great trunk lines of railroad (the *Vermont Central Railroad* and the *Grand Trunk* of Canada; the *Tunnel Line*, through Fitchburg, Greenfield, North Adams, and Troy, N. Y., and the *Boston and Albany Railroad*, through Worcester, Springfield, and Pittsfield) Boston is connected with the grain fields and pastures of the West and South-west, and ships to foreign countries great quantities of grain and beef. It is also the entrepôt of foreign goods for New England and the West. The receipts, in 1877, of flour, corn, oats, and wheat amounted to $14,000,000 in value.

37. **Railroads.** Within the state there are 1,854 miles of railroad. Eight lines center in Boston, connecting that city with all parts of the country—north, west, and south. The other chief railroad centers are Worcester, Springfield, Lowell, South Framingham, and Palmer. The principal railroad lines are:

Washington Elm, Cambridge.

The *Eastern Railroad, via* Lynn and Salem, to Portland, Me., and Halifax, N. S. Its chief branches within the state extend to Marblehead, to Gloucester and Rockport, and to Lawrence.

The *Boston and Maine Railroad, via* Lawrence to Portland, Me. Branches to Medford and Lowell; and from Wakefield to Peabody, and to Danvers, Georgetown, and Newburyport.

The *Boston, Lowell, and Nashua Railroad* to Nashua and Concord, N. H. Branches to Concord, Mass., and Woburn; and from Lowell to Lawrence, to Salem, and to Ayer.

The *Fitchburg Railroad*, with the *Vermont and Massachusetts*, and the *Troy and Greenfield, via* Hoosac Tunnel to Troy, N. Y. Branches to Waltham, and from South Acton to Marlboro'.

The *Boston and Albany Railroad, via* Worcester and Springfield, to Albany, N. Y. Branches to Brookline; and from South Framingham to Milford; and from Ashland to Milford and Woonsocket, R. I.

The *New York and New England Railroad, via* Blackstone and Willimantic, Conn., to New York. Branches to Norwood Center, to Needham and Medfield; and to Providence and Woonsocket, R. I.

The *Boston and Providence Railroad* to Providence, Rhode Island; with branches to Dedham, Stoughton, Taunton, and North Attleboro'.

The *Old Colony Railroad, via* Fall River to Newport, R. I. Branches: Braintree to Cohasset and Duxbury, and to Plymouth; Middleborough to Provincetown, on Cape Cod; and Wareham to Fair Haven.

The *Framingham and Lowell Railroad*, with its connections, joins Lowell, Framingham, Mansfield, Taunton, and New Bedford.

The *Boston, Clinton, and Fitchburg Railroad* joins Framingham with Marlboro', Clinton, and Fitchburg.

From Worcester the *Providence and Worcester Railroad* extends to Providence, R. I.; the *Norwich and Worcester* to Norwich, Conn.; the *Boston, Barre, and Gardner*, and *Monadnock, via* Winchendon to Concord, N. H.; the *Worcester and Nashua, via* Ayer to Nashua, N. H., and Portland, Me. From Palmer the *Ware River Railroad* extends to Winchendon; the *New London Northern* to New London, Conn., and *via* Amherst to Brattleboro, Vt. From Springfield the *Connecticut River Railroad* extends *via* Northampton and Greenfield to Brattleboro, Vt.; the *Springfield, Athol, and North-eastern* to Athol; the *New York, New Haven, and Hartford* to New York. From Westfield the *New Haven and Northampton Railroad* extends to Williamsburg and to New Haven, Conn. From Pittsfield the *Pittsfield and North Adams Railroad* extends to North Adams; the *Housatonic Railroad via* Stockbridge to Bridgeport, Conn. Besides these roads numerous branches reach almost every town in the state, except a few in Berkshire.

The *Massachusetts Central Railroad*, another line to connect Boston with the West, has been laid out and partly built through Hudson, Barre, and Northampton to the Hoosac Tunnel. This great tunnel through the Hoosac Mountain is 4¾ miles long; it is the longest in the world except the Mont Cenis Tunnel between Italy and France; it has been built at a cost to the state of $17,000,000 as the easiest and most direct route for commerce through

the Berkshire hills to the great West; the highest point of the mountain is 1,718 feet above the road bed.

The *elevations* above the sea level, on the *Boston and Albany* road, are: at Worcester, 44 miles from Boston, 477 feet; at Charlton, 57 miles, 905 feet; at Springfield, 98 miles, 75 feet; at Washington, 135 miles, 1,450 feet; at Pittsfield, 151 miles, 968 feet; at Albany, 202 miles, 25 feet. On the *Tunnel Line*, at Fitchburg, 50 miles from Boston, 430 feet; at Ashburnham, 61 miles, 1,106 feet; at Greenfield, 106 miles, 182 feet; at the Tunnel, 136 miles, 838 feet; and at Troy, 191 miles, 50 feet.

38. **Agriculture.** In this pursuit are engaged 8 per cent, or 30,000, of the workingmen; but for food, Massachusetts depends largely upon the West.

39. **Domestic offices** engage 44 per cent of the productive classes of Massachusetts, or some 425,000 people, a large part of them women; hence, this industry represents those home products and comforts whose worth is far beyond their pecuniary value.

Among them are blankets, rag carpets, domestic clothing, dried fruit, gloves, leggings, mittens, quilts, scarfs, rugs, socks, stockings, etc. Some of the marketable products of this kind may be mentioned—such as butter, beef, pork, mutton, milk, eggs, cider, cheese, pickles, poultry, maple sugar, etc.; also, fire-wood, railroad-ties, and lumber.

40. **Fisheries** engage about 7,000 of the working population. The capital employed is $7,270,000, and the product for 1875, $7,685,000. The chief are cod (product, $2,159,000), whale (product, $2,186,000), and mackerel (product, $1,924,000).

The principal ports engaged in cod fishing are, Gloucester (which produces about three-fourths), Provincetown, and Marblehead; in whaling, New Bedford (which produces six-sevenths), Provincetown, Dartmouth, and Fairhaven; in mackerel fishing, Gloucester (which produces one-half), Provincetown, Wellfleet, Boston, and Cohasset.

At Chicopee and Longmeadow, shad are caught. The cod and mackerel are obtained principally on the banks of Newfoundland. To secure the right to these fisheries, by a recent treaty, the United States pays the Dominion of Canada $15,000,000. Sometime since, Nantucket owned the largest whale fisheries in the world. No whale ships now sail from that island. Whales are caught chiefly in the Pacific and Arctic oceans.

Springfield

Entrance to Hoosac Tunnel.

41. **Government offices and the professions** engage about 3 per cent of the workingmen, or about 30,000.

This includes: United States, state, and city and town-officers; United States Army and Navy officers; lawyers and court-officers; physicians and clergymen; authors, artists, musicians, actors, teachers, scientists, etc.

Questions.—34. What per cent of the people are actively employed? What per cent in manufactures? Why so many? Give the value of manufactured products for a single year. Name the leading articles of manufacture. 35. What is said of ship-building? 36. How does the state rank in commerce? What facilities for foreign trade? 37. How many miles of railroads in the state? Name the principal railroads. Other important lines. Describe the Hoosac Tunnel. Give elevations at different points. 38. Are many people engaged in agriculture? 39. What are domestic offices? Are many so employed? Mention principal products. 40. What is said of the fisheries? 41. How many in the professions?

XII. GOVERNMENT.

42. The **government**, under which the people of this Commonwealth live, is of a threefold character—the United States, the State, and the Town—each of which will be described in order:

(1) The *United States Government.* This determines matters affect the whole country; such as our relations to foreign countries, dec ing war and making peace, coining money, commerce, crimes on high seas (that is, 3 miles or more from land), patent rights, co rights, the post-office, etc.

(2) The *State Government.* This can do nothing inconsistent v the National authority, but regulates the relations of individ within its borders, the ownership of property, and crimes aga persons and property.

(3) The *Municipal Government;* that is, the government of a city town. This can do nothing against the state authority; it ma police regulations, assesses taxes upon individuals, supports schools,

Besides these, several towns and cities, in greater or less number, are ganized into *counties* for certain purposes; such as maintaining court-hou jails, and houses of correction; laying out roads, etc., etc. The function counties are, of course, subordinate to the state authority.

In each of these there are 3 branches: The *Legislative*, wh makes laws; the *Executive*, which puts them in force; and the *J cial*, which interprets them.

UNITED STATES GOVERNMENT

43. Of the United St or General Governm the **Executive** is compo of a President and V President,* and a Cab appointed by the Presid consisting of the Secre of State, Secretary of Treasury, Secretary War, Secretary of Navy, Secretary of the terior, Postmaster-Gene and Attorney-General.

Within this state, subo nate to these and belongi the Treasury, are Collecto Customs at the ports, who lect duties on exports and ports, and Collectors of I nal Revenue in the distr who collect taxes on m ufactures, etc.; to the Department, the officers soldiers who man the forts carry on the arsenals, a Springfield and Watertown; to the Navy, the ships of war that protect harbors; to the Post-office Department, the Postmaster and post-office in town and city, where the letters and newspapers are distributed; to the I rior, the Commissioner of Education at Washington, who gathers statistics disseminates information relating to schools, and the Commissioner of Pat who secures to the rightful owners the value of their inventions.

The Army and Navy of the United States are under the direction of President.

44. The **Legislative** consists of a Senate composed of two m bers from each state, and a House of Representatives, with a m ber for each 150,000 inhabitants. A Senator is chosen for 6 years the General Court (see paragraph 45). For the election of Re sentatives, Massachusetts is divided into 11 Congressional distr The election takes place once in two years, in November.

*Chosen by electors from the several states, corresponding in numbe the National Senators and Representatives to which each state is ent (see paragraph 41); these electors are chosen by the people in Novembe each leap-year; on the ballot are usually printed the names of the me whom the electors are expected to vote for President and Vice-President.

5. The **Judicial** consists of a Supreme Court, Circuit Courts, and rict Courts.

he Supreme Court is composed of a Chief-Justice and eight Associate Jus-, appointed by the President, and holding office during good behavior. of these is assigned to each of the nine circuits into which the country vided, and holds court there. A local Circuit Judge also lives in each. Circuit is divided into several smaller Districts.

here are also a District Judge and other officers of these courts within this , such as United States District Attorney, Marshal, etc. These courts are in Boston.

he forts, arsenals, custom-houses, and post-offices belonging to the United es, are not subject to the state laws.

STATE GOVERNMENT.

3. Of the State Government, the **Executive** consists of a Gov-or and Lieutenant-Governor, chosen every year, in November, by people, and eight counselors, chosen at the same time from the t districts into which the state is divided for this purpose.

nferior executive officers are the Sheriffs in the several counties (see para-h 48) and the 21 state Constables, who are appointed by the Governor.

he state militia, consisting of officers and soldiers organized and equipped rding to law, for preserving the peace in case of riot, etc., or for war, if ssary, are also at command of the Governor.

Gloucester, from Fort Point.

7. The **Legislative** consists of the General Court composed of 40 ators, chosen by the people annually, one from each of the districts which the state is divided for this purpose, and 238 Representa-s, chosen in a similar way.

he Legislature meets annually on the first Wednesday in January, generally remains in session about five months.

oint committees, composed of three Senators and eight Representatives each, appointed on many of the most important subjects; such as the Judiciary, ways, Education, etc.; and questions are usually investigated by one of e committees before final action by the General Court.

8. The **Judicial** consists of a Supreme Court, composed of a Chief-tice and 6 associates; a Superior Court, composed of a Chief-Jus-and 10 Associates; and 47 Municipal and District Courts, each ing jurisdiction over a county or some part of a county.

n towns not within any district, Trial Justices have the same jurisdiction District Court. In each county there is also a Court of Probate and Insolv-, to settle estates. All the judges are appointed by the Governor, and l office during good behavior. The less important cases, and persons charged n minor crimes, are quickly tried in the lower courts. Appeals may be n to the Supreme Court, in which persons charged with capital crimes other important cases are tried.

ach county maintains buildings, at the county seat or capital, for holding rts, and preserving the records of the judgments of the courts and of the sfers of real estate.

9. The county officers are the Sheriff, the Registrar of Deeds, and asurer, each elected by the people for three years; the Registrar Probate and the Clerk of the Courts, for five years: three County nmissioners are elected, one annually, and each for three years.

MUNICIPAL GOVERNMENT.

50. The functions of Municipal, or Town and City, Government include also the three departments, Executive, Legislative, and Judicial.—the town being only a miniature state, as the state is simply a smaller nation.

In each town there is a Board of three or more Selectmen, who attend to the general affairs of the town, and whose chairman is the *executive* officer; a Board of Assessors, who make the valuation and assess taxes; Overseers of the Poor; and a School Committee, who have control of the Public Schools. The *legislative* function is performed by the voters*—men of sound mind, not paupers or criminals, and able to read and write—in town meetings; the *judicial*, by the court of the district.

In a city, which is divided into wards corresponding in some respects to towns, the Mayor is the *executive* officer, elected by the voters of the whole city annually; subordinate to him are the Chief of Police, or City Marshal, and the Police force, whom he appoints.

The *legislative* function is performed by a City Council† composed of a Board of Aldermen elected by the voters of the whole city, usually a part each year and for a term of two or more years; a Common Council composed of several members from each ward, elected by the voters of the ward, usually a part each year; and a Board of School Committee consisting of three, or some multiple of three, members, elected by the voters for three years, a part each year, either by the city at large or by wards, and having exclusive control of the Public Schools. The *judicial* function of a city is usually performed by a Municipal or Police Court.

51. There are within the Commonwealth 19 **cities** and 325 **towns.** In each the people make such laws as they think necessary for their prosperity and happiness, so long as these laws do not conflict with those of the state or nation, or with the constitution of either; in like manner the people of the whole state, by their representatives in the General Court, make whatever laws they choose, subject only to the United States authority. In making the state laws, also, the people of the town have a voice; and the people of the state have a voice in making the United States laws. If the Governor or the President, or any officer of either municipal, state, or national government, does not use his authority justly or wisely, another will soon be chosen in his place.

This is called a representative government, because the officers are chosen, and the laws are made, by the people or by their representatives.

QUESTIONS.—42. State the threefold nature of government to which the people are subject. Define the province of each. What three departments in each? 43. Name the officers in the Executive department of the General Government. 44. How is the Legislative department composed? 45. The Judicial? 46. In the State Government, with whom is the Executive power vested? 47. The Legislative? 48. The Judicial? 49. Name the County officials.

50. Describe the several functions of Municipal Government. 51. How many cities and towns in Massachusetts? Describe the processes of a "representative government."

XIII. EDUCATION.

52. The **education** of the people has been a prime interest of this Commonwealth from the first. In 1636, £400 were appropriated from the public treasury to help found Harvard College, "to the end that learning may not be buried in the grave of our fathers." It is the belief that a people who are to govern themselves, and maintain the blessings of liberty, need to be intelligent.

There are two classes of public educational institutions:

I. Those under the direct control of the state, or of city and town authority; and,

II. Those conducted by a board of trustees, acting under a charter from the state, and having a semi-official character.

*This is pure democracy, where the people act for themselves instead of by their representatives.

†Created by the City Council is usually a Highway Department, a Fire Department, and Overseers of the Poor, Assessors, etc., and other officers who attend to special duties.

There are also private schools of various sorts and character, not needing special mention.

53. The general interests of the **Public Schools** are in charge of the State Board of Education, composed of the Governor and the Lieutenant-Governor, *ex-officiis*, and eight members appointed by the Governor, one each year, for a term of eight years.

This board elects a secretary, who is the executive officer, and two agents. These officers visit the schools throughout the Commonwealth, from time to time; hold Teachers' Institutes in the several counties, for instruction in methods of teaching, etc.; and make suggestions to the board for the improvement of the schools.

54. Under the direction of this board, also, five **State Normal Schools** are carried on for the professional training of teachers, viz.: at Framingham, Westfield, Salem, Bridgewater, and Worcester. These rank high among institutions of their kind.

The board makes recommendations to the legislature, from time to time, of such changes in the laws as the interests of education may require.

They also control the School Fund of the state, now amounting to $2,067,790.54, one-half the income from which is expended for these general purposes; and the other half is distributed among the towns having less than 10,000 inhabitants, in the ratio of their school attendance.

A small appropriation is annually made for the Massachusetts Teachers' Association, and for County Associations, where the teachers of the state meet for the discussion of school questions.

Quadrangle, Harvard University.

55. Every child over five years old is required by law to attend school twenty weeks each year till the age of fourteen; and parents who neglect to send them, and persons who employ them unless they have attended school, are subject to a fine. Provision is also made for the confinement and the instruction of habitual truants; and these laws are enforced.

56. Each town and city is required to maintain, six months of the year, schools for all children between the ages of 5 and 15 years, where they may be taught the common English branches of study; and every town of 500 or more families must, in addition, maintain a High School for instruction in Latin and other higher studies. These schools provide what is called the *Elementary*, and the High School, the *Secondary*, education. They are carried on by the School Committee of the town.

In the cities, and in many of the larger towns, the committee elects a Superintendent, who gives his whole time to the management of the schools and the execution of the orders of the school committee.

Of these schools there are 3,317. The value of the buildings, sites, and other school property is $22,208,988. The number of pupils, all ages, is 282,784: and yet there are within the state 77,550 persons over 21 years old who can neither read nor write, 26,656 who can not write, and 307 who can not read. Of all these, the foreign-born number 92,363.

57. For the Secondary education, corresponding to the High Schools, there are numerous **Academies**, incorporated under the laws of the state, controlled by a Board of Trustees, and supported in part by the income of funds, either given by the state or by private munificence, and in part by tuition fees paid by the students. Such are the Phillips Academy at Andover; the Worcester Academy; the Wilbraha Academy; Dean Academy; the Monson Academy, etc.

58. For the Higher education, there are two **Universities**, and eig **Colleges**, five for men and three for women, supported by endowme from the state and from private citizens, and by the tuition fees students.

These are for *men:* Harvard University, at Cambridge, which has, besi the Academic Department, a Museum of Comparative Zoology, and Schools Law, Medicine, Dentistry, and two of Divinity; Boston University, at Bost which has Schools of all Sciences, Theology, Law, Medicine, Oratory, and L eral Arts; Williams College, at Williamstown; Amherst College, at Amhe Tufts College at Medford, which has also a Divinity School; Holy Cross C lege, at Worcester; and Boston College, at Boston.

For *women:* Mount Holyoke Female Seminary, at South Hadley; Sop Smith College, at Northampton; and Wellesley College, at Wellesley.

59. The following **Technical** and **Professional Schools**, also s ported by endowments and tuition fees, as above, deserve espec mention:

Massachusetts Agricultural College, at Amherst; Massachusetts Institute Technology, at Boston; the Free Institute of Industrial Science, at Worces the Lawrence Scientific School, at Cambridge; Andover Theological School Andover; Newton Theolog Institution, at Newton Cen New Church Theological Sch at Waltham; New England male Medical School, at B ton; Boston Dental College Boston; and Massachusetts C lege of Pharmacy, at Bost

Of the Incorporated Scho the value of buildings other property, is $4,651, This, however, does not incl a large amount of funds, wh income goes to pay for inst tion.

60. Next to the Sch and Colleges, the most v uable educational inst tion is the **Free Public brary.** Any town may gally appropriate a sum money equal to one do for each ratable poll in town, to found a Pu Library, and one-half this sum annually to carry it on.

These libraries in the principal towns bring thousands of books within reach of all citizens. In many of the towns and cities, men of wealth benevolence have donated large sums of money to found free libraries reading-rooms where magazines and newspapers are accessible to all citizen

61. This state has taken the lead in establishments for the re of the unfortunate, for the reform of criminals, and for protect the health of its citizens. A State Board of Health is constan employed in searching for the causes of disease, in all parts of state. A Board of State Charities looks after the poor, and minor criminals. The blind, the deaf, and the insane are all wa of the state; and humane efforts are made through official, as w as through private channels, to reform even the harder criminals.

Of the public institutions for these worthy objects are: Lunatic Hospit at Worcester, Taunton, Northampton, and Danvers (the first and the last these have cost, within the last three years, nearly $1,500,000 each for bu ings alone); the McLane Insane Asylum, Somerville; South Boston Ins Hospital, Boston; Insane Asylum, Ipswich; Herbert Hall, Worcester; Massachusetts Ear and Eye Infirmary, at Boston; the Massachusetts Sch for Idiotic and Feeble-minded Youth, at South Boston; the Perkins Institu and Massachusetts Asylum for the Blind, at South Boston; the State Ref School for Boys, at Westborough; the State Industrial School for Girls Lancaster; The State Primary School, at Monson (to these last three are c mitted children under 16 years of age who have been convicted of crime);

Almshouse, at Tewksbury; the State Workhouse, at Bridgewater; the Prison, at Concord; the Reformatory Prison for Women, at Sherborn.

STIONS.—52. Why is public education important? What was the first wards it, and when? Name the two classes of public educational insti-. 53. Of the first, who have general charge? 54. What Normal Schools ere, and what are they for? 55. What children must go to school, and ng? 56. How long each year must a town maintain schools? What must have a High School? 57. What is said of Academies? 58. Of sities and Colleges? 59. Of Technical and Professional Schools? Name cate the principal institutions of each kind. 60. What is the provision blic Libraries? 61. How does Massachusetts rank with regard to her ble and penal institutions? Name the most important ones.

XIV. COUNTIES.

shire, capital Pittsfield; incorporated 1761; part of Hampshire; 31 towns; tion 68,270; the western county of Massachusetts, extends from Vermont nnecticut, is drained by the Hoosic, Westfield, and Housatonic rivers, s abundant water-power. The surface is diversified by mountains, hills, lleys, and the scenery is very picturesque.

klin, capital Greenfield; incorporated 1811; part of Hampshire; 26 towns; tion 33,696; between Berkshire and Worcester, has Vermont and New shire on the north, and Hampshire County on the south. The Connecti-ver cuts it from north to south; and Millers and the Deerfield, east and The surface is partly broken by hills and mountains, but the alluvial are very fertile. Cattle, horses, and sheep are raised here, and the man-es are extensive.

pshire, capital Northampton; incorporated 1662; 23 towns; population between Franklin, Worcester, Hampden, and Berkshire, the only in-county, is intersected by the Connecticut River. Mounts Holyoke and nd an extension of the Green Mountains in the west, are the principal ons. The soil along the river is remarkably fertile, and the scenery ful. Tobacco, live-stock, dairy products, and manufactures are important es.

pden, capital Springfield; incorporated 1812; part of Hampshire; 2 cities; ns; population 94,304; extends from Berkshire to Worcester, and from shire County to Connecticut. It is intersected by the Connecticut River, hich flow the Chicopee and the Westfield. In soil, scenery, products, anufactures, it resembles Hampshire County. Six railroads run through tering at Springfield, Westfield, and Palmer.

ester, capitals Worcester and Fitchburg; incorporated 1731; 2 cities; 56 population 210,295; the largest county in the state, extends from New shire to Connecticut and Rhode Island, and has the three last-named es on the west, and Middlesex and Norfolk on the east. It is drained by ckstone, Chicopee, Ware, and Nashua rivers. The surface is generally ting, and most of the soil is naturally or artificially fertile. There are the county 2,000 manufacturing establishments. Hay, potatoes, Indian nd garden and dairy products are the staples.

lesex, capitals Lowell and Cambridge; incorporated 1643; 4 cities; 50 population 284,112; is bordered by New Hampshire and Essex, Suffolk, k, and Worcester counties; and traversed by the rivers Merrimac, Nashua, d, and Charles. It is uneven, but well cultivated and productive. potatoes, live-stock, and garden and dairy products are extensively The manufactures are very important. It is traversed by numerous ds.

x, capitals Salem, Newburyport, and Lawrence; incorporated 1643; 6 29 towns; population 223,342; borders on Middlesex and Suffolk coun-ie ocean, and New Hampshire. The surface near the sea is rough and The Merrimac River flows through the north-east part of the county. eople of several towns are extensively engaged in fishery. Fruit, grain, nd garden products are raised; and carriages, machinery, and shoes are actured to a large extent. Ice and granite are largely exported.

olk, capital Boston; incorporated 1643; 2 cities; 2 towns; population ; is the largest in population, though one of the smallest in extent. It Massachusetts Bay, and joins Essex, Middlesex, and Norfolk. Its manu-s, 2,546 in number, are extensive, with a capital of $48,000,000, em-g 43,550 operatives, raw material costing $60,000,000, and producing 0,000 in value annually.

olk, capital Dedham; incorporated 1793; 24 towns; population 88,321; he State of Rhode Island, Middlesex, Suffolk, and Plymouth counties, e ocean. Cohasset is detached by part of Plymouth County. The man-res are varied and extensive. The county is traversed by numerous rail-Blue Hill is the greatest elevation.

tol, capitals Taunton, Fall River, and New Bedford; incorporated 1685; s; 16 towns; population 131,087; joins Rhode Island, and Norfolk and Plymouth counties, and Buzzards Bay. It is drained by the Taunton River and other streams, which afford good water-power. The surface is nearly level, and the soil partly fertile. It has many good harbors. Garden products, wool, and grain are raised. The manufactures of iron, cotton, and woolen goods are very important. It is intersected by numerous railroads.

Plymouth, capital Plymouth; incorporated 1685; 27 towns; population 69,362; joins Bristol, Norfolk, and Barnstable counties, and Massachusetts and Buzzards Bay. Parts of the surface are sandy, rocky, and swampy; but under skillful cultivation the soil is productive. Large tracts of cedar and hard-pine forests furnish lumber. The iron, and boot and shoe manufactures are important. The "Old Colony" and "Cape Cod" railroads, and their branches, traverse the county.

Barnstable, capital Barnstable; incorporated 1685; 14 towns; population 32,144; the most eastern county; occupies the peninsula of Cape Cod, 60 miles long. It joins Plymouth County, and is bounded east and south by the Atlantic, and west by Buzzards and Cape Cod Bays. The soil is light and sandy. Dairy products, corn, and wool are raised to some extent. Fisheries and navigation engage many of the people.

Dukes, capital Edgartown; incorporated 1683; 5 towns; population 4,071; consists of Martha's Vineyard, a famous summer resort, and other smaller islands in the Atlantic. Many of the inhabitants are engaged in fishing. The county receives its name from the fact that it was under the government of the Duke of York (King James II. of England), it having been a part of New York till 1692.

Nantucket, incorporated 1695; population 3,201; is composed of the town and island of Nantucket, and four small islands. It was formerly engaged in the whale fishery. It is becoming known as a summer resort.

Lynn.

XV. CITIES AND TOWNS.

Boston (settled 1630; incorporated 1822; population 341,119; value $795,638,000), the capital of Massachusetts, and the seat of justice of Suffolk County, is the metropolis of New England and an important commercial city. It is situated on the west side of Massachusetts Bay, at the mouth of the Charles River, and is 232 miles north-east from New York, 200 miles about east from Albany, and 44 miles about north-east from Providence by railroad. It was built on a peninsula; but many thousand acres of the Back Bay and the South Boston Flats have been filled and join the peninsula to the main land.

The city includes South Boston and East Boston, the latter occupying an island nearly two miles long. Roxbury, Dorchester, Charlestown, West Roxbury, and Brighton have recently been annexed, though these districts retain their original names; the city has an extent of about 13 miles in length and eight in breadth. It is supplied with water from the Sudbury River and Cochituate Lake, 20 miles west of the city, and Mystic Lake in the towns of Arlington and Winchester. Bridges connect it with Cambridgeport, East Cambridge, Chelsea, and Everett. Washington and Tremont streets are busy thoroughfares, the former having been lately extended through the most closely built part of the city to Haymarket Square.

The city has a fine park, called Boston Common, containing nearly 50 acres, covered with lofty trees and ornamented with beautiful fountains and

artificial lakes. Near this is the Public Garden, in which is a fine equestrian statue of Washington, a statue of Everett, a monument to the discoverer of *anaesthesis*, and other works of art. Extending from the Public Garden is Commonwealth Avenue, a broad street, with an ornamental mall stretching through the middle, and palatial residences on either side.

The spacious harbor is sheltered by two peninsulas and numerous islands, and defended by Forts Warren, Winthrop, and Independence. It is four miles long, and has an area of 75 square miles, half of which affords good anchorage for the largest ships. The entrance is marked by four light-houses: Minot's Ledge light, where once a structure resting on iron piers went down in a storm (it has been replaced by a granite tower 100 feet high); Boston light, on Little Brewster Island, 80 feet high, the Narrows light, on Great Brewster Island; and Long Island Head light.

Among the most noted public buildings are the State-house, on Beacon Hill, fronting the Common (from its cupola, the view of the city, the harbor, and the country around, is unsurpassed; on the grass plat in front are bronze statues of Daniel Webster, the great statesman, and Horace Mann, the founder of the Public School system); the Custom-house, a granite structure, with dome and roof of solid stone; the City Hall, on School Street, with its bronze statue of Benjamin Franklin, a Boston boy; the Masonic Temple; Horticultural Hall; Quincy Market; United States Post-office; and Music Hall, one of the finest in the country, with the great organ of nearly 6,000 pipes, that cost $60,000. Among the scenes of historic interest are Bunker Hill, in the Charlestown district, the site of the battle being marked by a square granite shaft 220 feet high, having a winding stairway within leading to the top; Faneuil Hall, called the "Cradle of Liberty," where the Revolutionary Patriots met to deliberate; Dorchester Heights, an important point in the siege of Boston by the provincial troops; the Old South Church, at the corner of Washington and Milk streets, which was occupied by British troops; and Fort Independence, in revolutionary times the chief seaward defense of the town, then known as "Castle William."

The manufactures of Boston are varied and extensive, including ship-building, machinery, furniture, oil and sugar-refining, leather dressing, clothing, jewelry, chemicals, boots and shoes, etc. It is an important center of the leather, boot and shoe, wool, and dry-goods trades, both domestic and foreign. Its India and China trade was injured by the civil war, but is now partly restored. In foreign commerce Boston is the second city in the United States. The total value of its imports exceeds $60,000,000 annually; and that of its exports, $20,000,000; the arrivals of vessels being 10,000 yearly. The chief exports are beef, grain and lumber, fish and ice. Steamships of the Cunard line sail weekly from East Boston to Liverpool. There are in the city 60 National Banks, with a capital of about $50,000,000.

Longfellow's Home, Cambridge.

The United States Navy-yard, situated in the Charlestown district, is one of the largest and finest in the country.

Boston has an excellent system of graded schools, more than 460 in all, with about 1,200 teachers, and an attendance of 48,500 pupils. The city contains more than 170 churches; and it is distinguished for its numerous literary and scientific institutions, from which it has received the name of "The Athens of America." Among these are: the Athenæum, whose building and site cost $190,000, and which contains a library of 100,000 volumes, besides galleries of painting and sculpture; the American Academy of Arts and Sciences; the Boston Public Library, one of the largest in the country, which cost more than $360,000, and contains about 275,000 volumes; the Massachusetts Historical Society; the Massachusetts Horticultural Society; and the Lowell Institute, which has a fund of $250,000 to maintain free lectures on chemistry, physics, etc.

A destructive fire, in 1872, swept away 776 buildings in the heart of the city, valued at $25,000,000, and covering an area of 65 acres. The loss, which fell chiefly upon the shoe, leather, and wool interests, was estimated at $60,000,000. Fourteen lives are known to have been lost. The burnt district has since been rebuilt with business houses, even more elegant than those which were destroyed.

Lowell (incorporated 1836; population 49,688: value $39,300,000), one of the two capitals of Middlesex County, and the second city in size in the state, is situated on the Merrimac, near the mouth of the Concord, 26 miles northwest from Boston. It is one of the leading seats of the cotton manufacture in the United States. Twelve corporations, with a capital of $16,000,000, employ 16,000 operatives, and manufacture more than 2,500,000 yards of cotton cloth a week, besides woolen goods, carpets, shawls, hosiery, etc. There are also important iron works here, which employ 1,200 hands. The city derives its importance from its valuable water-power—the fall of the Merrimac within the city being 30 feet. It contains two Public Libraries, an Orphan Asylum, an Old Ladies' Home, a Young Woman's Home, and other charitable institutions. Seven railroads center here.

Worcester (settled 1684, incorporated 1848; population 49,317; value $53,488,0 one of the two capitals of Worcester County, is situated near the head-wa of the Blackstone, and within a circle of hills, 44 miles west from Bost From its position near the geographical center of the state, and its social portance, it has been called the "Heart of the Commonwealth. It is the of a great variety of manufactures, including boots and shoes, machin steam-engines, railroad iron, fire-arms, card-clothing, folding-chairs, carp looms, musical instruments, and wire; the wire-works located here are largest in the world. Railroads extend in six directions. Mechanics' Hal one of the finest and largest in the state, and, from the accessibility of place, state conventions, political and other, are often held here. Of the p lic institutions, the chief are the American Antiquarian Library, Free Pu Library, Worcester County Free Institute, Holy Cross College, Highland M tary Academy, State Normal School, Worcester Academy, Oread Institute, P lic High School, Natural History Society, etc.

Cambridge (settled 1630, incorporated 1846; population 47,838; value $66,081,0 a capital of Middlesex County, is situated on a broad plain on the north-v bank of the Charles River. It is the second city in the state in wealth, the fourth in population, and is chiefly noted as the seat of Harvard Univers the oldest, and in other respects the first college in the United States. Th are extensive printing establishments in the city, which make some of best books in the country. It is the home of many literary and scien men, whose grand old houses are models of taste and refinement—among th the poets, Henry W. Longfellow and James Russell Lowell. No city on continent is superior to this in cultured society. Memorial Hall is an eleg structure on the University grounds, erected by the alumni in memory their brothers who fell in the civil war. In Cambridge stands the old elm under which Washington took command the provincial troops in 1775.

Fall River (settled 1659; incorporated 1 population 15,340; value $50,382,000), one the three capitals of Bristol County, is situa on the east side of Mount Hope Bay, an of the Narragansett, at the mouth of the Ta ton River, 20 miles from the sea and miles south from Boston. It is at the head deep water navigation, being connected w New York by a daily line of steamers; a besides, it has superior water-power f Watuppa Lake. Its chief industries are works, that turn out 120,000 kegs of nails y ly; two print works, making 75,000,000 y of calico yearly; 38 cotton mills, which duce 300,000,000 yards of cotton cloth per num, more than one-half of all that is m in the United States; a bleachery; and merous mechanical enterprises; a large co wise and shipping-trade; and immense gra quarries. Its public institutions, are a C dren's Home, Free Public Library, etc.

Lawrence (incorporated 1853; population 34,916; value $23,329,000), on the three capitals of Essex County, is situated on both sides of the Merri 26 miles north-west from Boston. It was named for the Lawrence family Boston, who developed its industries. The river has a gradual fall within city of 26 feet. This led to its selection, in 1845, as a manufacturing cen A magnificent granite dam was thrown across the river, 900 feet long and feet high, at a cost of $250,000, and a canal, 1¼ miles long and 90 feet w has been built on the north side of the river, which is lined with factorie second canal has lately been built on the opposite side. Three of the p cipal corporations employ 10,000 operatives. The Pacific Mills are noted the educational and social advantages afforded the operatives, with a library of 6,000 volumes, reading-room, relief societies, hospitals for the and aged, etc. The original Pemberton Mill, a brick structure, fell in burying 700 persons in the ruins, 91 of whom were killed or mortally inju Lawrence has a beautiful Common, Court-house, City Hall, Masonic Tem Odd Fellows' and Music halls, several institutions of public and private be cence, and manufactures of machinery, carriages, hardware, and flour.

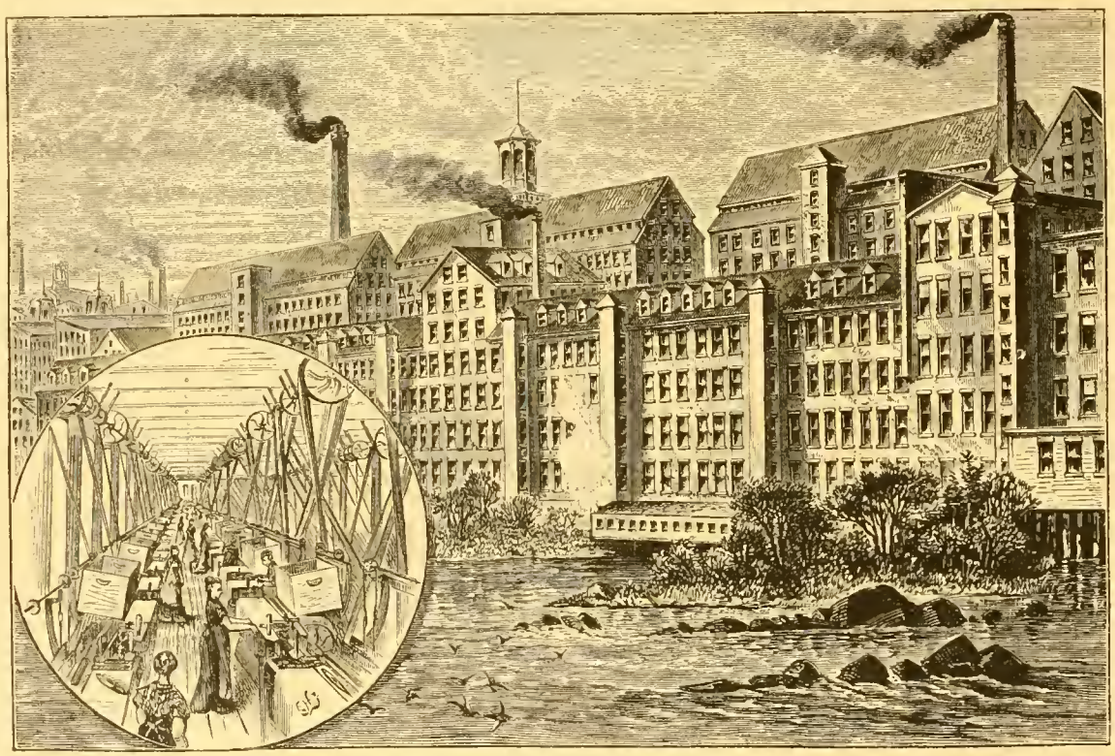
Lynn (settled 1629; incorporated 1849; population 32,600; value $27,713,0 lies on the coast, about 10 miles north-east from Boston, with which it is nected by two lines of steam-cars and one of horse-cars. Its harbor is protec by the peninsula of Nahant. From its nearness to Boston, and its position the coast, the city and the peninsula are favorite summer resorts. It has ornamental Common, a fine Soldier's Monument, and several beautiful pu buildings, among which are the City Hall, Music Hall, Odd Fellows', and change halls. The city is the first in the country in the manufacture of men's boots and shoes; it has also an extensive trade in kid and more leather. The first fire-engine was made here.

Springfield (settled 1636; incorporated 1852; population 31,053; value $41,742,0 the capital of Hampden County, is beautifully situated on the east bank

onnecticut, 98 miles from Boston, and 138 miles north-east from New The western part of the city is level. In the eastern part, the hills sites for many beautiful residences. Five railroads center here. The States Armory is located on the high ground in the eastern part of the ut the heavy work is done in the southerly part, on Mill River. It em- about 350 men, though during the Civil War 3,000 men were employed manufacture of 1,000 rifles daily. The value of manufactures in the ceeds $10,000,000 yearly. The City Library building is one of the best in te, and contains 39,500 volumes, besides a museum of natural history and ogy. Indian Orchard is a thriving suburb in the east part of the city. wn was burned by the Indians during King Philip's War, in 1675.

n (settled 1626; incorporated 1836, population 25,958, value $27,674,000), the capitals of Essex County, is situated on a small bay, protected by the ula of Marblehead. It is on the line of the "Eastern Railroad," and is also ted by rail with Lowell and Lawrence. For many years it was the chief rcial port of the New England colonies; but its harbor is not deep, so that commerce has gone to Boston and New York. It has now a large g trade, chiefly of coal. The Essex Institute, the Peabody Academy of , and the State Normal School are among its noted institutions. The industry is the manufacture of leather. When, during the Revolution, was blockaded, Salem opened its harbor to her ships. Here first the of Represent- ected as a sov- power; and e British were pulsed.

Bedford (incor- l 1847; popu- 25,895; value ,000), one of pitals of Bris- unty, is situ- n the Acush- ver, 55 miles from Boston, hich it is con- by two routes road. It was ly the chief the American fishery, which quite exten- carried on. Bedford has ellent harbor. dustries em- cotton and works, iron y, copper- hing works, m blue and paint works, ne candle fac- hoe factories, orks, etc. In y are a Friends' Academy, St. John's Hospital, Free Public Library, etc.



Cotton Mill at Lawrence.

erville (incorporated 1871; population 21,868; value $29,334,000), 3 miles Boston, is connected with that city by three lines of railroad. Its manu- es include brass-tubing, glass-bottles, art-material, etc. Many hills within y are covered with fine residences, and command pleasing views of the polis; they also possess historic interest.

sea (incorporated 1851; population 20,737; value $18,270,000), a city of k County, is a suburb of Boston, three or four miles north-east from the on. It is connected with Charlestown district by the Chelsea Bridge the Mystic River; and with Boston proper, by the "Eastern Railroad" ferry 1¼ miles across, called Winnisimmet, the ancient Indian name of wn. Chelsea Creek separates it from East Boston. It contains a United Marine Hospital and Naval Powder Magazine. It is chiefly a residential but has also important manufactures.

nton (settled 1639; incorporated 1864; population 20,445; value $17,773,000), f the capitals of Bristol County, is situated in the valley of the Taunton , 33 miles south from Boston. It is connected by rail with Boston, New rd, Fall River, and Providence. Its manufactures include locomotives, -engines, cotton-machinery, Britannia-ware, tacks, etc. The capital em- l exceeds $2,500,000. Its charitable institutions are a Home for Aged s, a City Mission with a commodious chapel, and an Academy.

ucester (settled 1623; incorporated 1873; population 16,754; value $19,166,000), ity of Essex County, situated on the promontory of Cape Ann, 28 miles -east from Boston, with which it is connected by rail. It has a fine harbor. The chief industries are fisheries and granite quarrying. In the cod and mackerel fishery it ranks the first in the state, if not in the world. It is also a popular summer resort.

Holyoke (incorporated 1873; population 16,260; value $10,631,000) is situated on the Connecticut River, eight miles north from Springfield, with which it is connected by rail; it is also the terminus of the "Holyoke and Westfield Railroad." It has an immense water-power, utilized by an excellent dam across the Connecticut River. The chief manufactures are paper (17 paper mills), cotton and woolen goods, wire, etc. The City Hall is a granite structure which cost about $220,000.

Newton (incorporated 1873, population 16,105; value $30,867,000) is situated in a beautiful region on the Charles River, eight miles west from Boston, with which it is connected by two lines of steam- and one of horse-cars. It is a city of great wealth, the home of many princely merchants of Boston. The Newton Theological Institution, Lasell Female Seminary, two Academies, a Lyceum, a Free and three other Public Libraries, and two Asylums are among its public institutions.

Haverhill (settled 1640; incorporated 1869; population 14,628; value $10,980,000) is situated at the head of tide-water, on the Merrimac, 18 miles from its mouth, and 32 miles north from Boston, with which it is connected by two lines of railroad. It is also connected by rail with Newburyport and Portland, Maine. Shoe manufactures and other collateral occupations are the leading industries; hats, woolen goods, and other articles are also produced. In the city are a fine Masonic Temple, City Hall, High School, etc. In colonial times this was a frontier settlement, exposed to frequent Indian attacks.

Newburyport (incorporated 1851; population 13,323; value $7,975,000), a capital of Essex County, is situated at the mouth of the Merrimac, 35 miles north-east from Boston, on the "Eastern Railroad." It contains four shipyards; and about 100 vessels of various kinds are owned here. Cotton mills, shoe-factories, an iron foundry, etc., are among its manufactories. The principal literary institutions are the Putnam Free School, Public Library, Free Reading-room, etc.

Fitchburg (incorporated 1872; population 12,289; value $13,217,000), one of the capitals of Worcester County, is situated on a branch of the Nashua River, fifty miles north-west from Boston. Five lines of railroad center here. Its principal manufactures are paper, chairs, machinery, woolen goods, etc., whose annual product is nearly $5,000,000.

TOWNS.

Adams (incorporated 1778; population 15,760; value $6,635,000) is situated in the valley of the Hoosic River, at the west end of the Hoosac Tunnel, 143 miles from Boston. The town was divided in 1878 into North Adams and Adams. These have extensive manufactures of cotton and woolen goods, paper, nitro-glycerine, boots and shoes, etc. Many Chinese are employed in the boot and shoe factories.

Pittsfield (incorporated 1761; population 12,267; value $9,402,000), the capital of Berkshire County, in the valley of the Housatonic River, is 151 miles from Boston, on the "Boston and Albany Railroad," 1,200 feet above the sea level. Around it are six beautiful lakes, whose waters flow into streams, the one to the east and the other to the west of the village, which unite to form the Housatonic. These lakes add much to the picturesqueness of the scenery; they afford excellent water-power, which is used in the manufacture of cotton

and woolen goods, silk, and tacks. The town contains a Park, a Public Library of 7,000 volumes, works of art, etc., "Maplewood," a Young Ladies' Seminary, and a Home for the Disabled.

Northampton (incorporated 1654; population 11,108; value $7,857,000), the capital of Hampshire County, is situated on the Connecticut River, 17 miles north from Springfield. Its manufactures include sewing machines and a variety of other articles. Among its institutions are a Female Seminary, State Lunatic Asylum, the Smith Charities, Smith College for Women, the foremost of its kind, and the Clark Institute for Deaf Mutes.

Malden (incorporated 1649; population 10,843; value $9,731,000), situated on the "Boston and Maine Railroad," four miles north from Boston, is a residential town, with excellent schools, churches, a Lyceum, etc.

Brocton (incorporated 1874; population 10,578; value $5,590,000), on the "Old Colony Railroad," in Plymouth County, 20 miles south of Boston, formerly called North Bridgewater, has large boot and shoe factories, and a good trade.

Chicopee (incorporated 1848; population 10,331; value $5,861,000), situated on the Connecticut River, at the mouth of the Chicopee, is four miles north from Springfield by railroad. It has large manufactories of cotton, swords, cutlery, machinery, and brass cannon. The Ames Company have here the largest manufactory of swords in the United States.

Connecticut Valley and Smith College, Northampton.

Waltham (incorporated 1737; population 9,945; value $10,257,000) is situated on the Charles River, nine miles west from Boston, on the "Fitchburg Railroad." The American Watch Company's factory, the largest in the country, and the one in which watch-making by machinery was first thoroughly introduced is located here.

Weymouth (incorporated 1635; population 9,819; value $6,119,000), called by the Indians Wessagusett, the second oldest settlement in the state [1626], is situated 11 miles south from Boston, on the South Shore branch of the "Old Colony Railroad."

Milford (incorporated 1780; population 9,818; value $5,107,000), which the Indians called Wopowage, situated in Worcester County, 30 miles south-west from Boston, on a branch of the "Boston and Albany Railroad," is a large boot manufacturing center.

Woburn (incorporated 1642; population 9,568; value $8,767,000) is situated on the "Boston, Lowell, and Nashua Railroad," 10 miles north-west from Boston. The principal manufacture is leather; a tannery was established here in 1673.

Attleboro' (incorporated 1694; population 9,224; value $4,627,000), 30 miles south-south-west from Boston, on the "Boston and Providence Railroad," has extensive manufactures of jewelry, calicoes, clocks, buttons, etc.

Quincy (incorporated 1792; population 9,155; value $7,203,000), named for Hon. John Quincy, on the "Old Colony Railroad," eight miles south from Boston, is one of the oldest towns in New England, it having been part of Braintree. Ship-building has been carried on here for more than 150 years; some of the finest ships in the country have been launched from Quincy Point. Granite is the staple product of the town. Bunker Hill Monument was built from it. The first railroad in the United States was built here, in 1827, to transport granite to the vessels. Here was the birth-place of the presidents, John Adams and his son John Quincy Adams. In the town are a Public Library, the Adams Academy, an excellent institution, and a State Home for Infirm Sailors.

Westfield (incorporated 1669; population 8,429; value $7,337,000), Indian name Waranoke, is situated on the Westfield River, nine miles west from Springfield, by the "Boston and Albany Railroad," in a beautiful valley at the southern continuation of the Green Mountains. Its prominent manufactures are whips, of which it produces more than all the country besides; cigars, in which are used 340 tons of tobacco yearly, most of which is raised in the Connecticut Valley; paper, a thick variety of which is used in the manufacture of racing boats; machine belting, pails, etc. The church-organ works, since 1844, have built nearly 500 organs. In the town are a State Normal School and Public Library.

Marlboro' (incorporated 1660; population 8,424; value $3,285,000), Indian name Okommakamesitt, is on the "Fitchburg Railroad," 25 miles west from Boston. It contains 25 boot and shoe factories, one of which is among the largest in the world.

Peabody (incorporated 1855; population 8,066; value $6,763,000) is situated on the "Salem and Lowell," and one branch of the "Eastern Railroad," five miles west from Salem. It is the birth-place of George Peabody, the London millionaire, for whom the town is named; he founded here, in 1855, the Peabody Institute, to which he gave $200,000. His bequests to benevolent and educational objects reach the sum of $7,000,000.

Marblehead (incorporated 1649; population 7,677; value $4,247,000), a seap with a spacious and deep harbor, is situated on a branch of the "Eastern Ra road," 20 miles north-east from Boston. Its chief industry is the shoe ma facture. It is a beautiful summer resort.

Natick (incorporated 1762; population 7,419; value $3,708,000) is situated the "Boston and Albany Railroad," 12 miles west from Boston. The prin pal business is shoe manufacture; there are also manufactories of hats and c riages. It has a Public Library of 10,000 volumes.

Beverly (incorporated 1668; population 7,263; value $8,931,000), situated o small inlet of the ocean north-east of Salem, is on the "Eastern Railroad," miles from Boston. It is chiefly important for its commerce and fisheries; it has also manufactures of shoes, carriages, and cotton and woolen goods.

Clinton (incorporated 1850; population 6,781; value $4,548,000), on the Nash River, 44 miles north-west from Boston, on the "Boston, Clinton and Fitc burg Railroad," has fine water-power, and manufactures wire-cloth, combs, c ton yarn, ginghams, Brussels and Wilton carpets, etc.

Brookline (incorporated 1705; population 6,675; value $30,769,000), the ho of many wealthy merchants, is situated on the Charles River, four miles w from Boston, with which it is connected by the "Boston and Albany," and t "New York and New England" railroads. It is the richest town in the sta It has a fine Public Library building and a granite Town-house.

Medford (incorporated 1630; population 6,627; value $9,736,000), on the Mys River, five miles north from Boston, is connected with the city by the "Bost and Lowell" and the "Boston and Maine" railroads. Rum and crackers largely manufactured here. It has a Public Library, and is the seat of Tu College.

Plymouth (incorporated 1620; population 6,370; value $4,565,000), Indian na Accomack, the capital of Plymouth County, situated on Massachusetts Ba 37 miles south-east from Boston, on the "Old Colony Railroad," is celebrat as the landing-place of the Pilgrim Fathers, and as the first settlement in N England. The climate is very healthy. There is a variety of manufactur some commercial business, and a fleet of vessels engaged in the Newfoundla fisheries. It contains many points of interest connected with the early s tlers; Forefathers' Monument, an imposing structure, is nearly completed.

Hyde Park (incorporated 1868; population 6,316; value $6,545,000), on t Neponset River, seven miles south-west from Boston on the "Boston and Pro idence" and the "New York and New England" railroads, is chiefly a pla of residence for people who do business in Boston.

Danvers (incorporated 1757; population 6,024; value $3,928,000) is north-w of Salem, and 19 miles north from Boston, by the "Boston and Maine" a Eastern" railroads. Its manufactures are leather, shoes, carpets, and bricks.

Williamstown, in Berkshire County, is noted as the seat of Williams' Colle Mt. Greylock is within the town, and Sand Springs, a well known summ resort.

Amherst, a pleasant village in Hampshire County, is the seat of Amhe College and of the State Agricultural College.

Amesbury, north-west from Newburyport, is engaged in carriage manufactu

Westborough, on the "Boston and Albany Railroad," builds sleighs exte sively. It is the seat of the State Reform School for Boys.

atertown, seven miles from Boston, on the "Fitchburg Railroad," has a ed States Arsenal and the beautiful Mt. Auburn Cemetery.

ıdover, 23 miles north from Boston, on the "Boston and Maine Railroad," e seat of Phillips Academy and a Theological Seminary.

xboro', 21 miles south-west from Boston, on the "Boston and Providence oad," is noted for its straw hat and bonnet factories.

ınson, on the "Boston and Albany Railroad," has extensive granite quarries bonnet factories.

nox, on the Housatonic River, and **Sandwich,** on Cape Cod, manufacture and glass-ware.

e, on the Housatonic River, has extensive paper mills.

ıkefield, on the "Boston and Maine Railroad," is noted for its willow-ware.

Wellesley, 15 miles from Boston, on the "Boston and Albany Railroad," is the seat of Wellesley College, and has many elegant country residences.

Stockbridge, in Berkshire County, the home of the Indian tribe of that name, is a fine old town, with an Academy and Public Library. Here, and in the towns around, many noted literary men and women have country seats.

Barnstable, on Cape Cod, is the capital of Barnstable County.

Dedham, the capital of Norfolk County, 10 miles south-west from Boston, on the "Boston and Providence Railroad," has a granite Court-house, Jail, etc.

Turner's Falls, in Franklin County, on the Connecticut, has a splendid water-fall, and one of the largest cutlery establishments in the world.

Other towns are: **Southbridge, Spencer, Leominster, Framingham, Webster, Hampden,** etc., etc. Find each on the map.

MAP DRAWING.

Draw nine vertical and six horizontal lines, as in the following figure, forming a rectangle composed of forty equal squares. Number the vertines from left to right, 3, etc., and letter the ontal lines upwards, *a*, tc.

Point A, at the inter-n of the lines 2 and the exact north-west r of the state.

Point B, at the inter-n of the lines 6 and 00 miles east of A, and es north of the Merri-River.

Point C is on the line lf-way from the line *e* e line *f*.

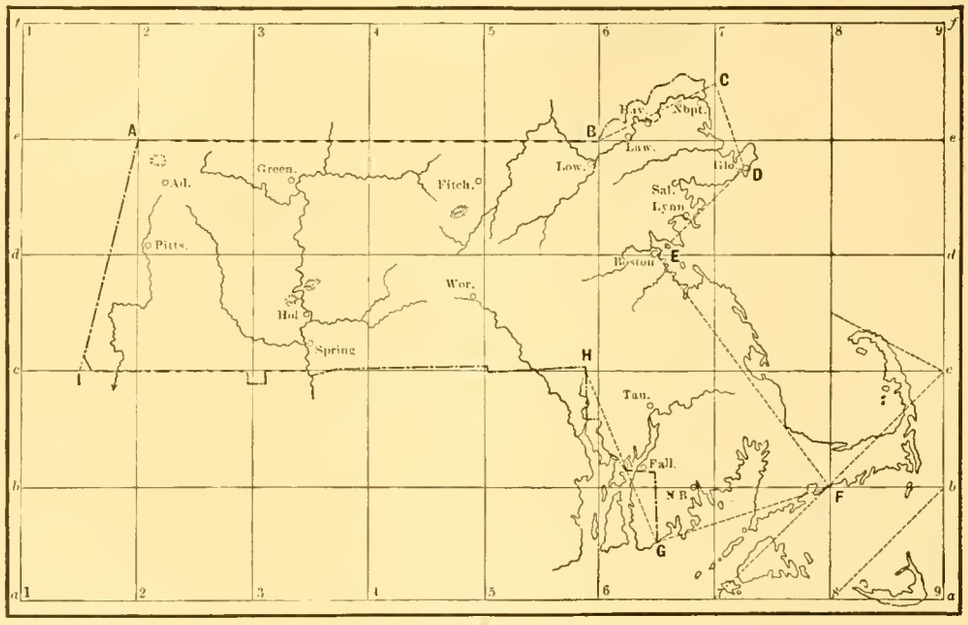
Point D is at the right e line 7, and below the *e*, one-fourth the side square.

Point E is on the line alf-way between the 6 and 7.

Point G is at the r of the square 6, 7,

Point H is a little the horizontal line *c*, s one-eighth of the side of a square to the left of the vertical line 6.

Point I is on the horizontal line *c*, half-way between the lines 1 and 2.



10. Connect these points in order by dotted lines, and thus obtain the outline of the main portion of the state.

11. To locate the peninsula of Cape Cod, connect a point on the line 8, half-way between the lines *c* and *d*, with the intersection of the lines 9 and *c*: and connect this last point with the point F.

12. To locate Martha's Vineyard, extend the last line to the intersection of the lines 7 and *a*. To locate Nantucket, connect the intersection of the lines 9 and *b* with the intersection of the lines 8 and *a*.

13. Draw the actual boundary lines so far as they vary from the dotted lines, and draw the outlines of the islands.

14. Draw the interior rivers and mountains of the state. Locate the principal cities, and letter the map.

15. The line AB is nearly on the parallel 42° 45′ north latitude.

16. Point D is Gloucester; point E, Boston; point F, Hyannis; point G, the south-east corner of Rhode Island; and point H, the north-east corner.

17. The side of a small square in the figure represents a distance of about twenty-five miles.